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STATE OF SOUTH CAROLINA

# REPORT

OF THE

## STATE COMMISSION OF FORESTRY

FOR THE YEAR

JULY 1, 1984 TO JUNE 30, 1985



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STATE DOCUMENTS

LEONARD A. KILIAN, JR., State Forester

COLUMBIA, S. C.

PRINTED UNDER THE DIRECTION OF THE  
STATE BUDGET AND CONTROL BOARD

STATE OF SOUTH CAROLINA

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*To Honorable Richard W. Riley, Governor and to the  
General Assembly of South Carolina:*

Sirs:

Pursuant to Section 3 of Act of General Assembly creating the State Commission of Forestry, approved April 26, 1927, which provides that the Commission shall "inquire into and make annual report upon forest conditions in South Carolina, with reference to the preservation of forests, the effect of the distribution of forests upon the general welfare of the State, and other matters pertaining to the subject of Forestry and tree growth including recommendations to the public generally as to reforestation." I have the honor to submit the report of the Commission for the period of July 1, 1984 to June 30, 1985.

Respectfully submitted,

STATE COMMISSION OF FORESTRY

EUGENE H. KNEECE, JR.

## STATE COMMISSION OF FORESTRY

Eugene H. Kneece, Jr., *Chairman*

### MEMBERS OF THE COMMISSION

Boris Hurlbutt, *Vice Chairman*, Walterboro

C. H. Niederhof, Goose Creek

Joseph C. Woodward, Sr., Eastover

Henry F. Floyd, Pickens

Joe Brice Williamson, Kingstree

John Edward Bankhead, Richburg

Bartow S. Shaw, Jr., Sumter

Dr. Bill L. Atchley, *President, Clemson University*, Clemson

A. Brandon Taylor, Jr., *Chairman Emeritus*, Spartanburg

### ADMINISTRATION

Leonard A. Kilian, Jr., State Forester and Secretary to the Commission

Claude F. Barden, Executive Assistant to State Forester

Chauncey R. Nichols, Staff Director

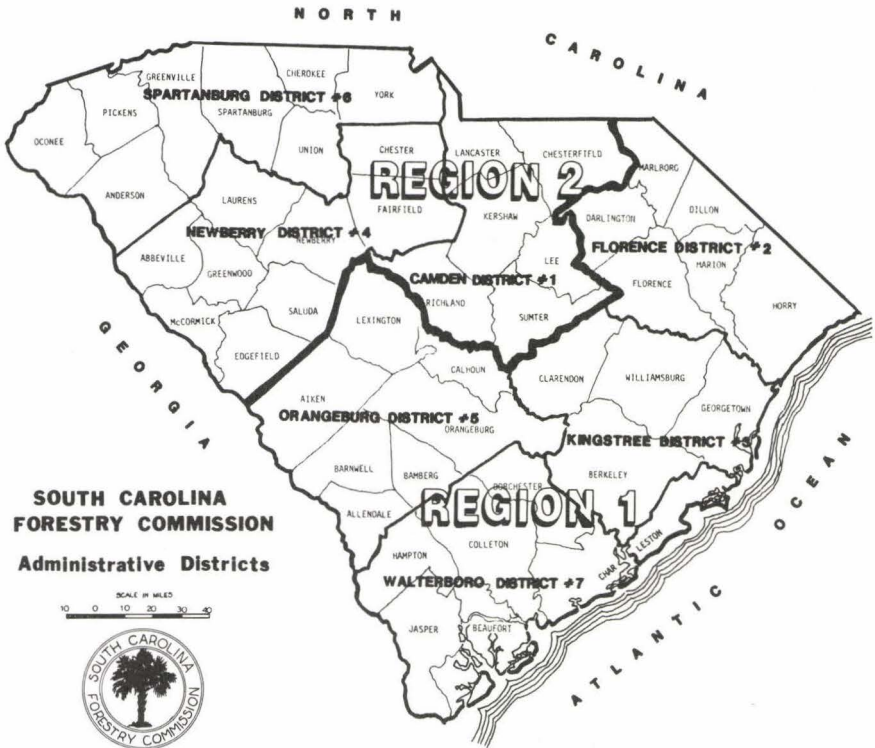
John M. Shirer, Assistant State Forester/Engineering and Logistics

Robert J. Gould, Assistant State Forester/Field Operations

Wray E. Freeman, Assistant State Forester/Administration

## ACCOMPLISHMENT SUMMARY

- Purchased and processed through shops 54 vehicles for specialized use by Forestry Commission.
- Completed construction of 3,300 sq. ft. District Office facility at Florence.
- Completed construction of office and renovation of managers residence at Niederhof Seed Orchard.
- 2,848 woodland examinations made by Commission foresters on 199,263 acres.
- Marked 110 tracts for landowners for timber cutting. A total of 2,094,334 board feet of sawtimber and 8,718 cords of pulpwood were marked. Landowners paid \$10,101.59 for this service.
- Provided technical assistance for 885 landowners for reforestation and timber stand improvement practices under state and federal cost sharing programs. A total of \$1,628,093 paid to landowners for work accomplished on 26,439 acres.
- Forest management services provided on 1,176 tracts and landowners paid \$153,365 for these services.
- Suppressed 14,260 wildfires which burned 114,166 acres — the second highest number of fires and seventh highest acreage burned since statewide protection began in 1945.
- Prosecuted 335 forest fire law violations.
- Activated and used two Army National Guard helicopters for fire suppression for the first time and made 71 water drops on 5 fires.
- Dropped 208,000 gallons of fire retardant on 126 wildfires with contract aerial tankers.
- Grew and distributed 51,635,770 forest tree seedlings including 628,215 containerized seedlings.
- Established 33.5 additional acres of seed orchard.
- Over 580 contacts with media for public information and education.
- Two publications and one slide tape program produced. One slide program "When A Forest Burns" won second place award in Society of American Foresters national competition.
- Reforested 741 acres of state forest and other state owned lands by planting.
- Issued 8,831 permits for hunting and fishing on lands controlled by the Commission.



Administration and supervision of Forestry Commission Programs is accomplished by organizing the forty-six counties into a Coastal Region with four districts and a Piedmont Region with three districts. Operations are supervised by a regional forester for each region and seven district foresters.

The state forests are supervised by two forest directors and a regional forester.

Each of the four nurseries and two seed orchards has a supervisor for the facility.

## **ADMINISTRATION DIVISION**

The Division of Administration supports the Forestry Commission's employees and programs through policies and procedures relating to budgeting, accounting and personnel services.

### **PERSONNEL SECTION**

The Personnel Section administers personnel management programs and policies for the Forestry Commission. Major program areas are employee relations, classification and compensation, personnel and position records management, recruitment, employee benefits, affirmative action, and worker's compensation.

#### **Workforce**

The South Carolina Forestry Commission has a total of 600 authorized full time equivalent positions classified in 55 separate job categories. Five hundred and seventy-one of these positions are funded by state appropriations.

#### **Personnel Turnover**

An analysis of employee turnover data reveals that 31 employees left their jobs during the fiscal year. There were 12 employees hired.

#### **Employee Injuries**

Most Commission personnel work in positions having a higher than normal risk of injury. The safety program through the leadership of a safety office in the Field Operations Division is directed toward reducing this risk. There were 60 job related injuries reported this fiscal year. Most of these were minor with only 4 resulting in hospitalization. A total of 207 work days were lost due to accidental injuries.

#### **Affirmative Action**

Affirmative Action has become a permanent part of our operation and was emphasized to supervisors through training sessions as well as by the State Forester. We began development of a new Affirmative Action Plan during the year and the revised plan was submitted to the South Carolina Human Affairs Commission for approval.



**FINANCIAL STATEMENT**  
**S. C. FORESTRY COMMISSION**  
**Fiscal Year 1984-85**

**BROUGHT FORWARD**

From Fiscal Year 1983-84		
Federal .....	52,946.49	
Sandhills State Forest .....	389,598.25	
Savings Bond Deductions .....	70.96	
Operating Revenue .....	187,292.27	
Seedling Revolving .....	574.65	
Forest Renewal Assessment .....	573,330.66	
Performance Bonds .....	2,000.00	
Supplemental Appropriation .....	1,242,678.00	
Total Brought Forward .....		2,448,491.28

**RECEIPTS**

Operating Funds		
<i>State Funds</i>		
Appropriation .....	11,969,511.00	
Supplemental Appropriation .....	1,624,169.00	
Total State Funds .....		13,593,680.00

*Federal Funds*

Federal Grants .....	791,533.15	
Sandhills State Forest .....	241,875.89	
Total Federal Funds .....		1,033,409.04

*Other Funds*

Hunting & Fishing .....	12,818.55	
Pinestraw & Miscellaneous .....	3,953.82	
Land Rents .....	60,695.63	
Timber Sales .....	182,051.66	

*Other*

Insurance Claims .....	3,966.23	
Equipment Rents .....	4,358.90	
Sale of Equipment .....	445,124.58	
Forest Products Assessment .....	262,268.64	
Miscellaneous Revenue .....	200.00	
		975,438.01

*Trust Funds*

Seedling Revolving .....	8,600.00	
Savings Bond Deductions .....	8,597.50	
Performance Bonds .....	8,619.05	
Dual Employment .....	2,144.94	
		27,961.49

*Capital Funds*

Capital Improvement Bonds .....	121,041.73	
Capital Projects Appropriation .....	273,500.00	
		394,541.73

**TOTAL FUNDS RETAINED BY**

FORESTRY COMMISSION .....		18,473,521.55
---------------------------	--	---------------

REVENUE FOR CREDIT TO THE  
GENERAL FUND

Prescribed Burning fees .....	49,157.50	
Firebreak Plowing Fees .....	73,815.90	
Timber Marking Fees .....	10,101.59	
Miscellaneous Fees .....	41.60	
Nursery & Timber Sales .....	844,841.85	
Rent Farm Land .....	400.00	
Rent Motor Vehicles .....	33,987.64	
Sale of Services .....	8,305.98	
Sale of Junk .....	22.30	
Sale of Firearms .....	150.00	
Indirect Cost Recoveries .....	47,597.46	
Total General Fund .....		1,068,421.82
GRAND TOTAL FUNDS AVAILABLE .....		19,541,943.37

DISBURSEMENTS

Transferred to General Fund .....	1,083,130.74	
Transfer-Payment for Seed Orchard .....	186,000.00	
Appropriation Lapse .....	88,018.34	
Expenditures .....	16,552,274.76	
Total Disbursements .....		17,909,423.84
BALANCE CARRIED FORWARD .....		1,632,519.53

Detail — Carried Forward

Supplemental Appropriation .....	789,924.00	
Sandhills State Forest .....	49,375.17	
Operating Revenue .....	167,647.56	
Forest Renewal Assessment .....	482,175.45	
Federal .....	59,851.69	
Seedling Revolving .....	575.68	
Savings Bond Deductions .....	93.46	
Performance Bonds .....	4,539.45	
Capital Improvement Bonds .....	— 15,807.97	
Capital Appropriated .....	92,000.10	
Dual Employment .....	2,144.94	
		1,632,519.53

## **ENGINEERING & LOGISTICS DIVISION**

The Engineering and Logistics Division provides staff service to all units of the Forestry Commission in matters relating to communications, purchasing, transportation of supplies and equipment, maintenance of equipment and permanent improvements, new construction, and property accountability.

### **Radio Communications**

The Forestry Commission's two-way radio communication system dates back to the early 1950's. The majority of radio units have been in service for more than fifteen years and many are in the 20-25 year age group. Forest fire fighting is an extremely hazardous activity and equipment operators working ahead of dangerous forest fires must rely on good communications to operate efficiently and avoid serious injuries and loss of life.

Two-way radio provides the only efficient and effective communications in the forestry program and particularly forest fire control. Radio is used to dispatch units to the fire location, to direct units to the fire line, to assign tasks and to report needs and situation data from the fire line.

From the first experimental use of radio in 1946, the Forestry Commission system has expanded to include radio units in every fire suppression unit, transport, tower, ranger truck, and overhead supervisor responsible for fire suppression. The Columbia Office, District offices, two State Forests and two nurseries are radio equipped. All rangers and many foresters are equipped with portable radio sets. Six airplanes are radio equipped and, in season, aerial tankers are supplied with radio sets.

In hazardous work situations such as fire fighting, safety is a major consideration. An operating two-way radio is an essential safety device for any person operating on the fire line.

### **Mechanized Equipment Construction and Maintenance**

All regular and specialized fire control equipment is modified and processed for field use at the Commission's Central Repair Shop in Columbia. During the year central shop personnel made numerous repairs to Forestry Commission vehicles and equipment and manufactured many special fire control and forest management items. Some of the work conducted at the central shop included:

- Modification of truck transport bodies
- Repair of medium tractors for field use
- Rebuilt fire plows
- Modified safety canopies
- Modified and repaired specialized equipment for use in aerial tanker program
- Rebuilt wrecked equipment

- Provided maintenance assistance to the district repair shops
- Performed major equipment overhauls and repairs on field equipment

### **Equipment Replacement**

During the year the following fire control replacement equipment was purchased:

- Twelve (12) tractor transport trucks
- Eight (8) crawler tractors
- Four (4)  $\frac{3}{4}$  ton 4 x 4 mechanic pickup trucks equipped with special bodies
- Eighteen (18)  $\frac{1}{2}$  ton 4 x 4 ranger pickup trucks with special equipment
- Two (2)  $\frac{3}{4}$  ton 4 x 4 ranger pickup trucks with special equipment
- Five (5) radio technician vans with special maintenance bodies
- One (1) truck tractor for central shop
- Three (3) fire plows
- One (1) passenger van
- Three (3) station wagons for forest tree nurseries

All new equipment purchased was processed through the central repair shop and adapted to the specialized job of forest fire suppression and other duties.

In August of 1984 a special equipment sale was conducted to dispose of equipment and miscellaneous items no longer essential to the Forestry Commission program. This auction sale included nineteen (19) medium suppression units (truck and tractor) which were not assigned to fire wardens currently employed, and the equipment fleet was reduced accordingly.

Additional funding is needed to maintain a normal equipment schedule. As equipment is continued in use beyond economical age, the state of readiness diminishes and continued use of old unreliable equipment will result in accelerated annual forest fire losses.

### **Purchasing and Property Accountability**

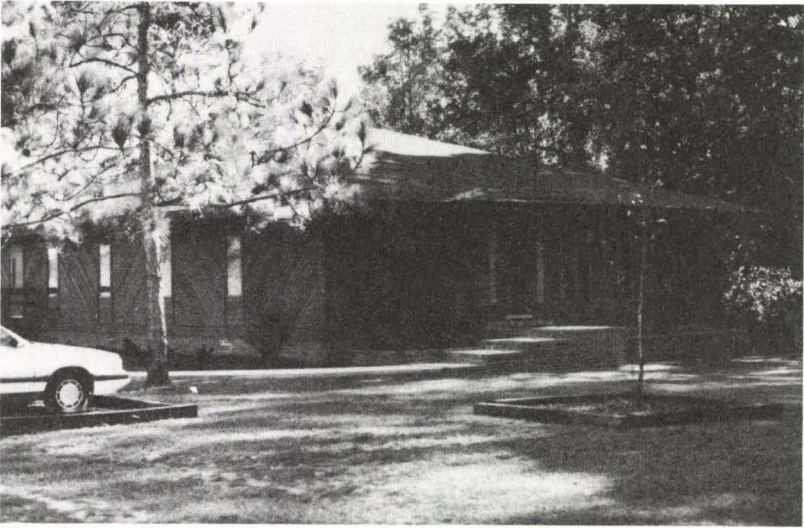
The purchasing section directs and coordinates the purchasing, property control, and warehousing activities. The section establishes specifications for the purchase of all Commission equipment and supplies and supervises the central warehouse function which carries an inventory of over 300 items, repair parts and supplies that are available to field units upon request. The fixed assets record of property accountability now contains 7,325 items which are maintained and inventoried each year.

### **Construction and Maintenance**

During the year Forestry Commission personnel contracted, designed, planned, purchased materials, and scheduled work crews to conduct

maintenance and construction of capital improvements at substantial savings. Major projects included:

- Completion of 3,300 sq. ft. District Office at Florence.
- Completion of office at Niederhof Seed Orchard.
- Completion security fence at Walterboro District Repair Shop including site grading.
- Completed renovation of Niederhof Seed Orchard manager's residence.
- Completed sale and dismantling of grain bins at Niederhof Seed Orchard as excess property.



**New Florence District Office Constructed by Commission Employees.**



## **FIELD OPERATIONS DIVISION**

The Field Operations Division provides operational and technical staff direction to the Forestry Commission field organization in each of the major program areas of forest management, forest fire protection, nurseries and tree improvement, information and education, forest insects and diseases, and overall agency training.

### **FOREST MANAGEMENT SECTION**

The Forest Management Section assists South Carolina citizens with management and development of the forest resources of the state. Programs include Woodland Management Assistance, Reforestation Programs, Forestry Services, Forest Products Utilization and Marketing Assistance, Resource Conservation and Development, and Watersheds. These programs assist owners in growing more timber, aid industries in more efficient utilization of the timber resource, and foster conservation of the forest resource.

There are 12.5 million acres of forest land in South Carolina. According to the 1978 U. S. Forest Service Survey, 73% of the land is owned by farmers and miscellaneous private owners. Forest industry owns approximately 18% with 9% in public ownership.

Based on the 1983 Interim Pine Survey approximately 233,000 acres of pine sites are harvested each year. Of this total, an estimated 178,000 acres are regenerated adequately, either naturally or by planting. Approximately 55,000 acres are left without adequate regeneration. To improve this situation the Forestry Commission is cooperating with the S. C. Forestry Association, The Tree Farm Committee, and Clemson Extension by forming a Forest Productivity Task Force. The Task Force has organized County Committees to contact landowners with cutover or unproductive lands and encourage them to reforest this land.

### **Woodland Management Assistance**

Professional foresters provide forest management advice and assistance to landowners. The land is examined and a written forest management plan is prepared. Recommendations for management may include silvicultural practices, forest protection, reforestation, harvesting, prescribed burning, wildlife habitat improvement, and recreation. This year 2,848 management plans were prepared for 199,263 acres.

Where practical, the landowner is referred to consulting or industrial foresters to assist in carrying out the management recommendations. This year 588 cases were referred to consulting foresters with 291 cases referred to industrial foresters.

Commission foresters provide timber marking services to landowners on a limited basis. For this service there is a charge of \$2 per thousand board feet of sawtimber and 60¢ per cord of wood. This year 110 tracts



were marked, with 2,094,334 board feet of sawtimber and 8,718 cords of pulpwood designated for cutting.

Prescribed burning plans are also prepared for landowners who require this service. Fire as a forest management tool is recommended for control of weed trees, seedbed preparation, site preparation in conjunction with mechanical and chemical methods, control of brown spot disease in longleaf pines, reduction of hazardous fuels, and improving wildlife habitat.

### WOODLAND MANAGEMENT ASSISTANCE 1984-85

<i>County</i>	<i>Woodland Exams</i>	<i>Acres Examined</i>	<i>Tracts Marked</i>	<i>Volume Marked</i>		<i>Total Woodland Examinations 1941-June, 1985</i>
				<i>Bd. Ft.</i>	<i>Cds.</i>	
Abbeville	72	4,009	3	26,847	10	1,455
Aiken	95	10,727	7	288,856	325	2,791
Allendale	50	3,303	1	25,484	22	666
Anderson	69	4,957	6	76,391	650	2,754
Bamberg	64	3,325	0	0	0	1,111
Barnwell	80	5,013	1	10,872	4	1,030
Beaufort	4	358	0	0	0	467
Berkeley	39	3,679	0	0	0	697
Calhoun	69	5,187	0	0	0	1,478
Charleston	11	956	0	0	0	585
Cherokee	44	6,038	3	0	859	1,187
Chester	50	2,833	1	0	106	1,185
Chesterfield	154	7,942	10	226,366	772	2,406
Clarendon	69	3,545	1	11,222	3	1,349
Colleton	26	1,761	0	0	0	2,354
Darlington	37	2,527	1	0	217	1,801
Dillon	39	1,343	0	0	0	1,404
Dorchester	28	3,979	1	0	128	776
Edgefield	35	2,212	1	102,503	150	836
Fairfield	97	6,819	1	0	29	1,507
Florence	96	5,726	3	124,951	199	2,649
Georgetown	46	6,565	2	43,598	37	551
Greenville	61	3,471	7	108,354	477	1,651
Greenwood	71	6,744	0	0	0	1,755
Hampton	64	2,740	0	0	0	1,600
Horry	76	8,643	1	36,873	0	2,157
Jasper	23	1,375	0	0	0	601
Kershaw	56	4,699	2	121,260	0	1,747
Lancaster	45	3,674	6	0	574	1,730
Laurens	73	4,961	1	0	46	1,671
Lee	47	3,138	2	67,111	84	1,069
Lexington	74	3,882	2	27,787	57	2,117
Marion	50	2,640	3	64,871	0	733
Marlboro	34	2,787	1	0	37	1,064
McCormick	48	2,886	0	0	0	1,255
Newberry	61	4,355	1	0	96	1,761
Oconee	57	4,096	9	68,648	320	1,948
Orangeburg	129	8,057	5	312,627	369	3,295
Pickens	60	2,851	11	152,764	1,130	1,782
Richland	121	7,037	4	112,622	60	2,537
Saluda	71	3,691	0	0	0	1,379
Spartanburg	36	2,367	2	0	65	1,679
Sumter	96	6,314	1	0	68	1,727
Union	36	3,821	0	0	0	801
Williamsburg	106	8,110	3	84,327	62	2,113
York	79	4,120	7	0	1,762	2,285
TOTALS	2,848	199,263	110	2,094,334	8,718	71,496

### Hardwood Program

On October 1, 1984 the S. C. Forestry Commission became a member of the N. C. State Cooperative Hardwood Research Program. The Co-op. has been involved with hardwood tree improvement programs and still is to some extent, but the emphasis now is on hardwood silvicultural research and management of natural stands.

As a member of the Co-op the Forestry Commission will receive the following benefits:

1. Access to clones of improved stock from existing clone banks of members.
2. Data from past and current research projects.
3. Training from the Co-op staff including short courses and in-house training for field foresters.
4. Consultation from the Co-op staff for individual private landowner tracts.

The Forestry Commission is presently participating in a growth and yield of natural stands study and a *Paulownia species* seed source study. Planned projects include participating in a natural regeneration residuals study and establishing a clone bank at Niederhof Seed Orchard.

## REFORESTATION PROGRAMS

### State Program

#### *Forest Renewal Program (FRP)*

The South Carolina legislature, recognizing the south's unique potential to supply the nation's continuing demand for forest products, established the Forest Renewal Program (FRP) in 1981. The program provides financial cost sharing assistance to private woodland owners in reforesting cut-over and understocked forest land. With the support of forest industry, the program is jointly funded through an assessment of those industries producing primary wood products and an appropriation by the state legislature.

This program and the federal programs provide an average of 50% reimbursement to carry out approved forestry practices for reforestation of woodlands or forest improvement practices.

In 1982 the program was funded for the first time by a \$100,000 state appropriation. This permitted an assessment of \$400,000 from forest industry, and created a \$500,000 Forest Renewal Fund.

The program was funded at the same level for 1984-85.

#### Forest Renewal Program — Funded Applications

	# Landowners	Acres	C-S Dollars
Site Preparation and Planting .....	153	6,857	\$577,534
Natural Regeneration — Hardwood ...	3	70	2,730
Timber Stand Improvement .....	9	491	15,219
TOTALS .....	169	7,418	\$595,483

#### *Tornado Reforestation Program (TRP)*

The 1984 legislature through a special proviso appropriated \$100,000 for forestry aid to private landowners who suffered timber damage in the March 28, 1984 tornado. The maximum assistance would be \$10 per acre cost-share for reforesting the woodland. The proviso also stated that the Forestry Commission would refund to private landowners the cost of the seedlings. This cost in addition to the \$100,000. The seedling cost was established at \$12.60 per acre thus providing financial assistance of \$22.60 per acre to participating landowners.

The 1985 legislature also provided that any unused funds from the \$100,000 would be applied to replanting 1984-85 TRP areas that had poor survival due to drought.

### Tornado Reforestation Program (TRP)

Year	# Applications	Acres Planted	Cost Share @ \$10/ac.	Seedling Reimbursement @ \$12.60/ac.	Total Paid to Landowner
1984-85	45	2,331.5*	\$ 23,315.00	\$16,247.70	\$39,562.70
1985-86**	26	2,314	23,140.00		
Total	71	4,645.5	\$ 46,455.00		
Balance for replanting			\$ 53,545.00		
Total Funds			\$100,000.00 plus seedling reimbursement		

\* Includes 1,042 acres using non Forestry Commission seedlings.

\*\* To be planted during 1985-86 planting season.

### Federal Programs

#### Forest Incentive Program (FIP)

#### Agricultural Conservation Program (ACP)

These cost share programs are administered by the U.S. Department of Agriculture Stabilization and Conservation Service (ASCS). The Forestry Commission provides technical forestry assistance to landowners and approves qualifying acreage.

Since 1974 \$11,096,940 have been allocated to South Carolina landowners under FIP. Through June 30, 1984, landowners have been paid \$9,788,610, with the balance obligated and held until practices are completed.

Agricultural Conservation Program (ACP) funds are also available for landowners.

### Reforestation Cost — Share Programs — Performance Completed

Practice	Number of Landowners			Acres			Cost-Share Payments		
	FIP	ACP	FRP	FIP	ACP	FRP	FIP	ACP	FRP
1. Bare Land Planting	98	214	8	3,480	5,291	146	\$ 78,029	\$116,245	\$ 3,255
2. Re-plant (Spot or Solid)	4	5	—	224	56	—	4,633	510	—
3. Site Preparation and Planting	291	142	107	9,477	2,336	4,748	830,813	161,442	409,679
4. TSI — Pine Release	4	3	5	155	50	339	5,150	1,580	10,926
5. Natural Regeneration — Pine	—	1	—	—	7	—	—	161	—
6. Natural Regeneration — Hardwood	—	—	3	—	—	130	—	—	5,670
TOTAL	397	365	123	13,336	7,740	5,363	\$918,625	\$279,938	\$429,530

Total: Landowners	885
Acres	26,439
C-S Payments	\$1,628,093

### Forest Services

Through this program the Commission provides landowners forestry services to assist in afforestation, reforestation, and to maximize production from their woodland. For these services the landowner is charged the cost of performing the service.

The following services were available to landowners during the year:

- Firebreak Plowing — performed by Forestry Commission employees using agency equipment for \$30 per mile.
- Prescribed Burning — performed by Forestry Commission employees using agency equipment for \$3 per acre.
- Prescribed Burning Standby — an agency unit and employee on standby at burning site while landowner performs burning under an approved plan for \$10 per hour.
- Equipment Rental Program — agency owned tree planters, bedding plows, drum chopper, and disc harrow made available to private landowners for use in reforestation at rates from \$3 to \$15 per acre.

### Forest Services Accomplishments

<i>Service</i>	<i># Tracts</i>	<i>Miles-Acres</i>	<i>Receipts</i>
Firebreak Plowing . . . . .	832	1,886 mi	\$72,220
Prescribed Burning . . . . .	206	13,437 ac	40,347
Prescribed Burning Standby . . . .	49	4,626 ac	4,966
Equipment Rental . . . . .	89	4,618 ac	35,832
Totals . . . . .	1,176	1,886 mi 22,681 ac	\$153,365

### Utilization and Marketing

#### *Pine Sawtimber and Pulpwood Prices*

Sawtimber prices began the year stable, but prices and demand were notably down during the last half of the year. Many landowners put off sales during this period. Pine pulpwood prices were fairly stable. Hardwood pulpwood prices were also stable, except in the upper Piedmont where it was almost impossible to sell.



### Pine Sawtimber & Pulpwood Prices for South Carolina\*

<i>Fiscal Year</i>	<i>Weighted Average Price Per Thousand Board Feet Scribner Scale</i>	<i>Weighted Average Price Per Standard Cord</i>
1980-81 .....	\$117.76	\$13.58
1981-82 .....	138.80	15.18
1982-83 .....	141.51	16.03
1983-84 .....	133.95	15.71
1984-85 .....	120.82	15.33

\* Sales of timber marked by Commission Foresters on private property.

#### *Commodity Drain*

During the year information was gathered from all primary wood using industries for a commodity drain report. The report issued for 1983 showed 1,264,714 board feet and 3,326,701 cords harvested in South Carolina.

#### *Industry Assistance*

The Forestry Commission continued to provide direct assistance to the wood using industries. Assistance was in the areas of sawmill improvement, felling and bucking, improved drying techniques, and wood energy.

#### *Miscellaneous Assistance*

Commission personnel handled 154 miscellaneous utilization, marketing, and wood energy requests during the year.

#### *Ninety Six District Resource Conservation and Development Project*

The Ninety Six District Resource Conservation and Development (RC&D) Project consists of Abbeville, Edgefield, Greenwood, Laurens, McCormick and Saluda Counties. This project was initiated and sponsored by local citizens, and by federal, state, and local governments. Industry and others are working together on proposals that the local citizens consider necessary to develop a better way of life for the people in the area by conserving and developing the human and natural resources of the region.

The primary objective of this project is to assist landowners, local units of government, and other agencies by providing guidance in land use planning, promoting multiple use of the forest, and showing ways to increase production, provide more employment opportunities, and protect the forest from fire and erosion through control measures.

Accomplishments for the current year:



- Woodland clinic for vocational agriculture students
- Project Learning Tree for teachers
- Forest Taxation Workshops for landowners
- Assisted in development of County Forestry Association chapters
- Access Road Workshops — Woodland Erosion Control
- Forest Resource Analysis update
- Hardwood Management Seminar
- Forest Marketing Seminar
- Christmas Tree survey
- Set up portable sawmill demonstration at Greenwood
- Talks, radio, and television programs on RC&D projects
- Forestry practices tours

### **Watersheds**

A program to help control water runoff on the small watersheds and to protect bottomlands along the smaller streams from overflow was initiated some years ago through Public Law 566. Recently two watersheds involving forestry activity have been approved for operation. They are Salkehatchie in Barnwell and upper Savannah in Anderson and Abbeville. Forestry Commission personnel will provide technical assistance as needed on these watersheds. As additional watersheds are approved for operations, Forestry Commission personnel will also provide these with technical assistance as needed. This assistance is provided under an agreement with the U. S. Forest Service.

### **Christmas Tree Survey**

The Forestry Commission produces about two million Christmas tree seedlings annually that are available to Christmas tree growers.

An annual Christmas tree survey was initiated to obtain information on source of trees, markets and trends of sales. The 1984 survey indicated that 73% of the Christmas trees sold in S. C. were imported. A total of 140,881 trees were sold with only 35,954 of these grown in South Carolina.

The goal is to promote South Carolina grown trees to obtain a larger share of the local market for South Carolina growers as well as possible export opportunities. Promotion will be a joint effort of the Forestry Commission, Clemson Extension, S. C. Christmas Tree Growers Association, and the S. C. Department of Agriculture.

### **FOREST FIRE PROTECTION SECTION**

The South Carolina Forestry Commission is charged by state law with the responsibility of protecting all privately owned and state owned woodland from wildfire. At present, there are 12,031,090 acres of woodland under protection. Additionally 548,724 acres of national forestlands

are under the protection of the U. S. Forest Service with another 280,101 acres of woodland owned and protected by other federal agencies.

A formal agreement between the South Carolina Forestry Commission and the U. S. Forest Service provided for mutual aid in regard to fire detection and suppression along national forest boundaries.

### **Southeastern States**

#### **Forest Fire Compact Commission**

The 1954 General Assembly passed legislation enabling South Carolina to join with nine (9) other southeastern states to form a Forest Fire Compact Commission. Other states belonging to the Commission are: Alabama, Georgia, Florida, Kentucky, Mississippi, North Carolina, Tennessee, Virginia, and West Virginia. The membership of the Commission for each state is composed of a Compact Administrator (the State Forester) and a four-member Advisory Committee. The Advisory Committee for South Carolina for 1984-85 was composed of: Leonard A. Kilian, Jr., State Forester; Representative Marion P. Carnell, Ware Shoals, and Mr. Archer Smith of Eastover.

The thirty-first annual meeting of the Southeastern States Forest Fire Compact Commission (SSFFCC) was held on May 20, 1985 at Lexington, Kentucky. Several working committees were established to improve the effectiveness of the Compact and the Modular Airborne Fire Fighting System (MAFFS) was demonstrated.

### **Southern States Fire Chiefs**

The annual meeting of the Southern Fire Chiefs was held at Lexington, Kentucky on May 21, 1985. Discussion topics were fireline safety, economic planning, fire prevention, fire retardants, fire weather forecasting, communication, mutual aid fire agreements, mechanized equipment, and federal emergency assistance.

### **S. C. Emergency Preparedness Agency (Civil Defense)**

On April 6, 1973, an act was signed by the Governor providing for Civil Defense and Disaster Control in South Carolina. This act set up an agency to be designated as the South Carolina Emergency Preparedness Agency (formerly Civil Defense).

The South Carolina Forestry Commission maintains contact with the South Carolina Emergency Preparedness Agency and cooperates closely with them on matters concerning all emergencies and natural disasters.

### **Rural Fire Protection**

#### *Fire Protection — Title IV*

The Rural Development Act of 1972, Title IV (Public Law 92-419), as amended, authorized the Secretary of Agriculture to develop a Rural Community Fire Protection Program. This program applies to rural

communities throughout the country and is established to provide financial and technical assistance for organizing, training, and equipping local fire fighting forces in communities under 10,000 population. Qualifying fire departments have been able to apply for funds under this program on a 50/50 matching basis. Funds may be utilized for fire hose, protective clothing, communications equipment, and breathing apparatus. Funding for the current year was set at \$47,000 and provided assistance to 80 departments.

### *Excess Equipment*

Excess federal equipment, loaned to the Forestry Commission by the U. S. Forest Service, is provided to qualifying rural fire departments for conversion to useful pieces of fire fighting equipment. The department receiving this equipment agrees to paint, maintain, and insure it and to respond to calls by the Forestry Commission. All equipment is returned to the Forestry Commission when no longer needed by the department.

Since the Cooperative Rural Fire Program began in January of 1976, 318 vehicles and other miscellaneous tanks and spray equipment have been loaned to 218 rural fire departments in the state. At present 159 departments have in use 254 pieces of excess equipment. During this year 40 pieces of equipment were issued to qualifying fire departments.

## **Weather**

### *Fire Weather Forecast*

Since July 1965 regular and special fire weather forecasts have been available to the Forestry Commission, other agencies, and individuals through the National Weather Service.

Throughout the fire season, fire weather and smoke management forecasts are received twice daily by the Forestry Commission and relayed to all field offices and fire towers as well as other forestry interests. Special forecasts are available upon request for areas with large fires and during periods of extreme fire danger. During the summer months only the smoke management forecasts are given daily.

### *Weather Stations*

A fire weather station is located in each district. The information from these stations is used in the National Fire Danger Rating System with this information also furnished daily to all fire control personnel. The weather stations also furnish special information to the Fire Weather Forecaster and information to assist in general forecasting.

### *Precipitation*

Precipitation in South Carolina during 1984-85 averaged 38.47 inches as recorded by NOAA and the South Carolina State Climate office. This

was 9.85 inches below the State's annual average of 48.32 inches, and the driest in the last thirty years.

#### Average precipitation by months

<i>Month</i>	<i>Rainfall (Inches)</i>	<i>Normal (Inches)</i>	<i>Departure from Normal (Inches)</i>
July 1984 .....	8.42	5.90	+2.52
August 1984 .....	3.50	5.18	-1.68
September 1984 .....	1.49	4.37	-2.88
October 1984 .....	2.12	2.88	- .76
November 1984 .....	1.81	2.65	- .84
December 1984 .....	1.86	3.49	-1.63
January 1985 .....	3.26	3.53	- .27
February 1985 .....	5.74	3.78	+1.96
March 1985 .....	1.01	4.84	-3.83
April 1985 .....	1.32	3.56	-2.24
May 1985 .....	3.09	3.55	- .46
June 1985 .....	<u>4.85</u>	<u>4.59</u>	<u>+ .26</u>
Total .....	38.47	48.32	-9.85

#### Five-year summary of precipitation

<i>Fiscal Year</i>	<i>Rainfall (Inches)</i>	<i>Departure from Normal (Inches)</i>
1980-81 .....	41.30	-7.02
1981-82 .....	56.74	+8.42
1982-83 .....	51.69	+3.37
1983-84 .....	51.70	+3.38
1984-85 .....	<u>38.47</u>	<u>-9.85</u>
Average .....	47.98	- .34

#### Readiness Plan

Initiated in the fall of 1982, the Commission's Readiness Plan System considers the influence of weather and fuel conditions on fire behavior (NFDRS indices), the chance of a fire starting, and the capability of the Fire Control Organization at any given time. Readiness plans give guidance in work planning and fire control activities. This allows the Commission to perform all of its many functions while at the same time meet its fire control responsibilities. Readiness Plans are on a scale of 1-7 with 1 being the lowest state of readiness and 7 the highest.

During the 1984-85 fiscal year, "Readiness Days" were as follows:



Number of Readiness 1 Days —	63
Number of Readiness 2 Days —	133
Number of Readiness 3 Days —	94
Number of Readiness 4 Days —	47
Number of Readiness 5 Days —	17
Number of Readiness 6 Days —	8
Number of Readiness 7 Days —	3

### Smoke Management

In the spring of 1980, Voluntary Smoke Management Guidelines for Forestry Prescribed Burning Operations were adopted. This statewide program was developed by a committee of the S. C. Forestry Association in cooperation with the Forestry Commission.

The objective of the program is to minimize particulate concentrations of smoke in smoke sensitive areas resulting from forestry prescribed burning operations by defining those days and volumes of vegetative debris that may be burned.

During this fifth year of the program 1,845 prescribed burns on 234,578 acres were carried out under the Voluntary Smoke Management Guidelines.

### Legal Fires

Legal fires are forest fires which are authorized by the landowner, started by him or his authorized agent and burn entirely upon his land. Individual landowners reported 6,529 fires that burned an estimated 508,340 acres for various purposes during 1984-85.

### Summary of Legal Fires

District	Hazard Reduction Hardwood Control		Wildlife Improvement		Grazing		Site Preparation		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Camden .....	226	35,058	54	15,092	—	—	97	5,879	377	56,029
Florence .....	255	12,123	101	4,392	16	660	65	4,264	437	21,439
Kingstree .....	701	89,486	163	37,500	187	2,567	221	11,046	1,272	140,599
Newberry .....	189	12,581	39	5,417	8	91	312	25,483	548	43,572
Orangeburg .....	477	56,743	2	570	1	3	189	10,790	669	68,106
Spartanburg .....	27	1,976	3	531	—	—	88	6,309	118	8,816
Walterboro .....	1,977	121,959	285	21,345	548	11,365	298	15,110	3,108	169,779
Total .....	3,852	329,926	647	84,847	760	14,686	1,270	78,881	6,529	508,340

### Law Enforcement

#### Law Enforcement Officers

The Forestry Commission has 94 Forest Law Enforcement Officers. They are commissioned by the Forestry Commission under statute authority of the 1982 General Assembly. The Forest Law Enforcement

Officer has statewide jurisdiction for the enforcement of forestry laws of the state and the duly enacted regulations of the Commission. All Forest Law Enforcement Officers are trained by the Criminal Justice Academy prior to being commissioned and in-service training is given annually to keep officers up-to-date on changes that occur. In carrying out its law enforcement responsibilities, the Forestry Commission works closely with other state and local law enforcement agencies.

### *Summons Law*

The Forestry Commission continued to use the Forestry Summons in carrying out its law enforcement responsibilities. The summons were used very effectively in enforcement of the burning bans imposed during the year.

## STATE SUMMARY LAW ENFORCEMENT INFORMATION Fiscal Year 1984-85

	<i>Camden</i>	<i>Florence</i>	<i>Kingstree</i>	<i>Newberry</i>	<i>Orangeburg</i>	<i>Spartanburg</i>	<i>Walterboro</i>	<i>State Total</i>
<b>PART A. NO. OF VIOLATIONS</b>								
1. Willful and Malicious	11	4	12	22	32	96	98	275
2. Intentional	468	1,051	2,839	143	966	100	2,314	7,881
3. Careless and Negligent	526	471	492	406	639	393	435	3,362
4. Other Violations	4	4	7	9	10	12	10	56
5. Total Violations (1-4)	1,009	1,530	3,350	580	1,647	601	2,857	11,574
6. Notification Violation	106	18	13	16	86	5	71	315
7. Total All Violations (5 & 6)	1,115	1,548	3,363	596	1,733	606	2,928	11,889
8. No Fire Law Violations	214	462	92	514	549	288	252	2,371
<b>PART B. NO. OF PROSECUTIONS</b>								
1. Willful and Malicious	—	—	—	—	—	5	1	6
2. Intentional	—	1	1	1	1	1	—	5
3. Careless & Negligent	6	22	22	8	19	15	23	115
4. Notification Law	24	4	64	15	14	4	28	153
5. Other Violations*	—	10	—	—	8	10	60	88
6. Total	30	37	87	24	42	35	112	367
<b>PART C. NO. OF CONVICTIONS</b>								
1. Willful and Malicious	—	—	—	—	—	—	—	—
2. Intentional	—	1	1	—	—	—	—	2
3. Careless and Negligent	6	22	22	6	18	13	16	103
4. Notification Law	24	4	64	15	14	4	27	152
5. Other Violations*	—	9	—	—	7	8	54	78
6. Total	30	36	87	21	39	25	97	335

\* Includes prosecutions and convictions that may not show up on a fire report such as: Authority of State Forester to prohibit fires and Governor's Proclamation.



*Burning Notification Law*

The State Forester cancelled burning notifications under the burning notification law on three occasions during the spring fire season. On January 25, 1985 the first burning ban was placed in effect in the Walterboro District. This ban was extended to Berkeley County on January 26. The ban was lifted on January 31. On Tuesday, March 12, the situation warranted imposing the burning ban again for Camden, Florence, Kingstree and the Walterboro Districts and was extended to the entire state on March 13. This ban was lifted on March 22. The burning ban was invoked again on a statewide basis on April 1 and was lifted on April 15.

The Governor issued a Proclamation and Declared a State of Emergency on burning on April 4 and this continued into effect until April 15. The burning restrictions imposed by the governor and the State Forester were very effective in helping to hold the fire losses to a minimum.

**ANNUAL BURNING NOTIFICATION SUMMARY**  
**Fiscal Year 1984-85**

<i>County</i>	<i>Number Notifications Received</i>	<i>Number Fires Escaped</i>	<i>Number Technical Violations</i>	<i>Number Prosecutions</i>	<i>Number Convictions</i>
Abbeville	975	4	4	1	1
Aiken	6,946	69	6	—	—
Allendale	573	13	5	2	2
Anderson	903	—	—	—	—
Bamberg	768	6	4	3	3
Barnwell	1,576	33	18	1	1
Beaufort	2,780	18	31	—	—
Berkeley	2,892	6	5	17	17
Calhoun	504	3	26	—	—
Charleston	2,180	17	3	10	10
Cherokee	640	5	24	—	—
Chester	488	2	5	5	5
Chesterfield	1,842	18	17	1	1
Clarendon	1,562	40	19	14	14
Colleton	4,809	61	17	7	6
Darlington	460	3	—	—	—
Dillon	461	2	1	1	1
Dorchester	1,282	5	3	—	—
Edgefield	493	2	—	—	—
Fairfield	2,039	40	13	3	3
Florence	969	—	—	—	—
Georgetown	2,381	39	5	11	11
Greenville	3,524	4	7	1	1
Greenwood	1,489	6	9	—	—
Hampton	2,099	36	5	8	8
Horry	1,467	4	—	1	1
Jasper	1,276	19	43	3	3
Kershaw	2,114	—	—	5	5
Lancaster	430	1	83	7	7
Laurens	1,546	5	6	3	3
Lee	325	4	108	3	3
Lexington	6,139	31	3	1	1
McCormick	199	2	2	—	—
Marion	651	3	—	—	—
Marlboro	639	3	1	2	2
Newberry	1,077	5	2	2	2
Oconee	1,647	3	—	1	1
Orangeburg	1,268	43	9	7	7
Pickens	1,073	11	—	—	—
Richland	1,274	5	—	—	—
Saluda	281	1	—	1	1
Spartanburg	1,289	—	17	1	1
Sumter	1,801	13	287	8	8
Union	656	—	—	—	—
Williamsburg	1,682	14	19	22	22
York	1,874	11	—	1	1
Totals	73,343	610	807	153	152

## Fire Detection

### *Fire Towers*

Basic forest fire detection is accomplished by the interlocking network of 132 forest fire lookout towers. These towers are strategically located so each tower's normal range of visibility overlaps with adjoining towers. With overlapping coverage, smokes can be observed, located and checked out. This year 11,576 fires were reported by towers.

### *Aerial Detection*

Forestry Commission aircraft are used to separate legal burning from wildfires, to help ground crews find the best path to a fire, to warn of danger, and aid in fire suppression.

During 1984-85 the Commission operated seven federal excess property aircraft which were flown a total of 1,520 hours. Contract aircraft were utilized for 1,162 hours during the same period. Total aircraft use for the year was 2,682 hours.

### SUMMARY OF AIRCRAFT USE — 1984-85

Month	Camden Hours	Florence Hours	Kingstree Hours	Newberry Hours	Orangeburg Hours	Spartanburg Hours	Walterboro Hours	Total Hours
July	4.8	—	—	—	10.0	1.8	—	16.6
August	8.1	3.7	6.1	—	3.4	.6	—	21.9
September	9.1	.4	4.3	—	7.5	—	.6	21.9
October	8.0	4.2	3.2	4.4	5.3	2.4	—	27.5
November	8.6	41.3	3.6	5.2	15.0	8.1	—	81.8
December	15.1	19.5	46.0	—	17.7	2.7	18.7	119.7
January	23.3	43.1	61.2	7.5	52.8	23.0	113.3	324.2
February	16.2	18.4	33.4	—	13.6	.4	48.0	130.0
March	89.4	170.6	260.9	55.7	187.4	66.6	167.9	998.5
April	74.4	213.4	205.7	54.1	126.3	40.4	124.2	838.5
May	6.9	14.8	13.2	—	—	2.5	—	37.4
June	10.8	3.0	49.6	—	—	1.0	—	64.4
Total	274.7	532.4	687.2	126.9	439.0	149.5	472.7	2,682.4

## Aerial Retardant Delivery

### *Air Tanker Program*

The primary purpose of air tankers is to aid ground crews in the initial attack of wildfires. They are also used in areas of difficult terrain such as coastal swamps/bays and steep mountain slopes where the use of ground equipment is limited. Air tankers cannot replace ground equipment, but because of their capability to respond wherever needed quickly, they can keep a fire from spreading until ground crews arrive and complete control.

The Forestry Commission has used air tankers for retardant delivery on wildfires for the past seven years. In all years, tankers were contracted for the peak fire occurrence time in February, March and April.

Two aerial tankers were used for the spring fire season. Tanker 101, a Lockheed PV-2, was stationed at Walterboro February 18 through May 3,

1985. Tanker 104, a Douglas A26, was stationed at Georgetown February 22 through April 22, 1985. Satellite bases were set up at Florence, Camden, and Barnwell. A mobile base was located at Spartanburg. These two tankers flew 105 hours and dropped 208,000 gallons of retardant in 190 drops on 126 separate fires. Approximately 21 drops were made to protect buildings. Estimated values saved were over \$2,000,000 for a cost benefit ratio of 12:1.



Aerial Tanker use was double that of any previous year.

### *Helicopter Delivery Program*

In September 1982 the Forestry Commission and the South Carolina Army National Guard completed a week of training in the use of helicopters for aerial retardant delivery. Training was given to the Guard in fire behavior, fire tactics, communications, and retardant drops. Using a 250 gallon bucket furnished by the Forestry Commission, practice runs were made on fires set for the training exercise. Training was conducted in October 1983 to keep pilots proficient in the use of the aerial bucket.

To activate this program for wildfire control, the State Forester must request assistance from the Governor through the Office of Emergency Preparedness.



During April 1985 the program was activated for the first time for forest fire use. Between April 8 and April 11, two South Carolina Army National Guard Helicopters made 71 water drops on 5 separate fires with excellent results.



Army National Guard Helicopters were activated for the first time and used in Horry County.



They were able to deliver water from nearby ponds to wildfires rapidly.



**PROTECTION PERSONNEL**  
**Fiscal Year 1984-85**

	<i>Organized Personnel</i>				<i>Volunteer Personnel</i>	<i>Grand Total</i>
	<i>Rangers</i>	<i>Wardens</i>	<i>Tower Operators</i>	<i>Totals</i>		
Abbeville	1	3	1	5	170	175
Aiken	1	5	5	11	318	329
Allendale	1	3	3	7	81	88
Anderson	1	3	2	6	301	307
Bamberg	1	3	2	6	387	393
Barnwell	1	3	2	6	263	269
Beaufort	1	5	3	9	54	63
Berkeley	1	7	4	12	167	179
Calhoun	1	3	2	6	233	239
Charleston	1	6	3	10	61	71
Cherokee	1	2	1	4	789	793
Chester	1	3	1	5	96	101
Chesterfield	1	4	4	9	217	226
Clarendon	1	5	3	9	522	531
Colleton	1	7	5	13	77	90
Darlington	1	3	3	7	191	198
Dillon	1	3	2	6	68	74
Dorchester	1	6	3	10	38	48
Edgefield	1	3	1	5	56	61
Fairfield	1	4	3	8	454	462
Florence	1	5	4	10	392	402
Georgetown	1	5	4	10	235	245
Greenville	1	4	4	9	170	179
Greenwood	1	3	2	6	148	154
Hampton	1	4	3	8	123	131
Horry	1	8	4	13	370	383
Jasper	1	6	2	9	59	68
Kershaw	1	6	6	13	60	73
Lancaster	1	4	2	7	96	103
Laurens	1	3	2	6	187	193
Lee	1	3	2	6	25	31
Lexington	1	6	5	12	134	146
Marion	1	5	3	9	260	269
Marlboro	1	4	3	8	80	88
McCormick	1	2	2	5	34	39
Newberry	1	3	2	6	184	190
Oconee	1	2	2	5	20	25
Orangeburg	1	7	5	13	527	540
Pickens	1	4	4	9	65	74
Richland	1	6	4	11	195	206
Saluda	1	2	1	4	49	53
Spartanburg	1	4	2	7	150	157
Sumter	1	4	3	8	147	155
Union	1	3	1	5	100	105
Williamsburg	1	8	4	13	273	286
York	1	4	3	8	340	348
Total	46	196	132	374	8,966	9,340

### Forest Fire Suppression

During fiscal year 1984-85 South Carolina recorded 14,260 wildfires and 114,167 acres burned which includes forest and non-forest lands. There were 12,487 fires, burning 105,422 acres of forest lands, on non-forest lands there were 1,773 fires burning 8,745 acres. The non-forest category refers to land such as fields, pastures, and rights-of-way.

In terms of drought, duration of adverse weather systems, and extremely high fire occurrence, this may well have been the most severe fire season experienced in South Carolina. This was the second highest number of fires ever recorded and the seventh highest number of acres burned since statewide fire protection began in 1945.

Suppression forces performed well under stressful conditions and held acres lost to an average of 8.0 acres per fire. This success can be attributed to; increased training effort, more and better mechanized equipment, dispatch of personnel to hot counties, and assistance from Rural Fire Departments.

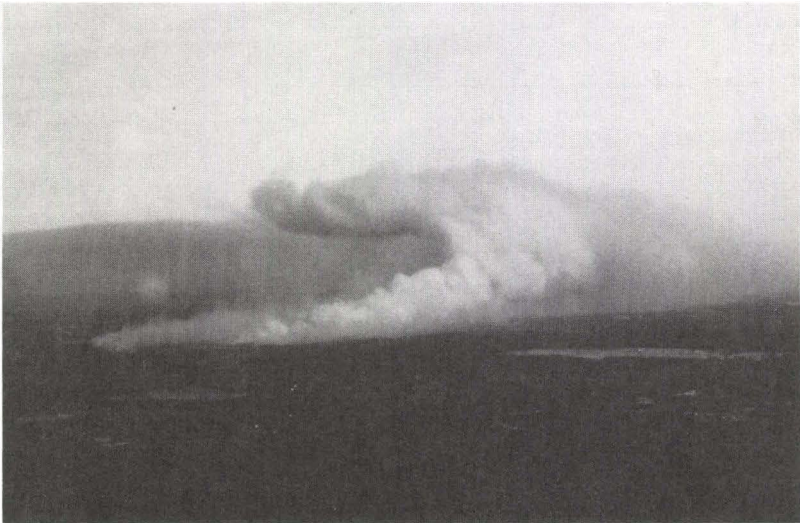
### Historical Fire Records Comparison of 7 Years of Greatest Acreage Losses

<i>Fiscal Year</i>	<i>Number of Fires</i>	<i>Acres Burned</i>	<i>Average Acres/Fire</i>	<i>Mechanized Equipment Tracked</i>	<i>Wheel</i>
1985	14,260	114,167	8.0	180	—
1966	5,467	127,804	23.4	105	—
1955	7,022	158,786	22.6	31	21
1954	6,532	119,142	18.2	16	29
1951	6,643	147,840	22.2	11	24
1950	8,424	240,504	28.5	11	24
1947	6,601	232,040	35.2	5	36

During the year 27 fires burned over 300 acres each and 8 fires burned over 1,000 acres each. These 27 fires accounted for 23,940 acres burned. The largest fire occurred in Horry County and burned 2,500 acres in Browns Bay. The Red Fox Fire burned 2,368 acres in Kershaw County and was the most destructive in terms of personal property lost. This fire destroyed 8 residential homes, 2 stables, two horses and several dogs. The single most disastrous fire occurred in Charleston County on April 1 when a Westvaco Company employee was fatally burned while assisting in the suppression of the Adams Run Fire.



**Extreme drought conditions caused hazardous wildfires.**



**Adverse wind profiles contributed to the destructiveness of the Red Fox Road Fire in Kershaw County.**

The greatest number of fires and acres burned this year were experienced during the month of March when 4,135 fires burned 44,458 acres. There were five months, December through April, when fire occurrence was over 1,400 fires. These five months accounted for 83% of the fires and 91% of the acres burned. Counties experiencing more than 8,000 acres burned were; Colleton, Berkeley, Georgetown, and Williamsburg. These four counties accounted for 33% of the total acres burned. Counties recording less than 300 acres burned were; Saluda, Pickens, Newberry,

Oconee, Chester, McCormick and Cherokee. Highest fire occurrence was in Williamsburg County (1,094) and lowest fire occurrence was in Saluda County (35).

In summary, it was one of the most severe fire seasons in the history of the Forestry Commission and on occasion, pushed fire suppression personnel to the limit. There were three cancellations of the burning notification law by the State Forester and a State of Emergency declared by the Governor, for a total of 30 days. Forestry Commission personnel were dispatched to other areas of the state representing over 520 man days. Army National Guard Helicopters equipped with 250 gallon buckets were used successfully on fires in Horry County. Aerial Tanker use this year was double of any previous year.

In addition, South Carolina activated the Southeastern Forest Fire Compact on May 28 for the use of a high flotation unit from North Carolina for a bay fire in Horry County. The unit was used one full day and returned home the next day. Also, a South Carolina crew of 12 men and 5 suppression units were dispatched to Florida for 6 days to assist U. S. Forest Service in fire suppression in that state.

Forestry Commission personnel also checked 4,530 false alarms during the year. A false alarm is a check on a suspected forest fire that ultimately does not require suppression action.

The leading cause of forest land fires in order of importance were: Incendiary 61%, Debris Burning 21%, and Smoking 6%.



# FOREST LAND FIRES BY COUNTY AND CAUSE

## FISCAL YEAR 1984-85

County	Lightning		Campfire		Smoking		Debris Burning		Incendiary		Equipment Use		Railroad		Children		Misc.		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Abbeville	—	—	—	—	7	44.1	19	285.3	26	53.1	5	1.8	4	58.9	4	8.6	5	5.4	70	457.2
Aiken	10	23.6	—	—	16	89.7	78	261.1	184	314.1	21	37.6	8	10.7	29	68.0	21	25.5	367	830.3
Allendale	5	143.5	1	1.2	15	43.9	35	149.2	64	401.0	2	2.9	6	7.4	3	4.3	—	—	131	753.4
Anderson	1	1.5	1	2.4	33	314.8	17	58.9	24	300.2	7	63.8	—	—	8	23.0	7	22.5	98	787.1
Bamberg	1	12.0	—	—	7	11.3	55	121.3	73	666.2	5	7.2	—	—	8	19.7	6	7.1	155	844.8
Barnwell	5	6.9	—	—	20	133.4	27	169.3	27	90.6	4	7.3	—	—	5	33.8	2	4.3	90	445.6
Beaufort	5	8.4	—	—	2	1.7	64	483.1	128	720.2	1	2.0	—	—	3	46.5	7	16.6	208	1,278.5
Berkeley	—	—	2	15.5	3	52.0	89	1,575.4	765	6,875.5	9	101.2	—	—	2	1.5	4	55.5	874	8,676.6
Calhoun	2	26.5	—	—	15	72.4	41	147.7	7	107.0	4	4.4	2	22.1	4	11.3	4	6.9	79	398.3
Charleston	1	1.7	2	15.0	22	73.5	26	857.6	315	5,023.6	1	3.0	—	—	12	44.0	8	15.5	387	6,033.9
Cherokee	—	—	—	—	12	24.0	20	39.4	48	174.3	4	4.6	1	3.0	7	23.5	8	22.2	100	291.0
Chester	1	9.0	1	8.2	9	33.3	10	26.8	22	62.5	8	93.8	—	—	2	.5	6	14.7	59	248.8
Chesterfield	5	21.2	1	2.2	32	90.0	57	250.4	68	131.8	3	6.5	2	1.4	5	6.9	16	295.3	189	805.7
Clarendon	5	22.1	3	4.4	8	6.8	80	411.3	695	4,864.1	14	45.6	—	—	7	18.1	5	50.6	817	5,423.0
Colleton	2	88.0	1	6.0	34	1,420.1	110	844.2	710	5,969.5	7	608.0	1	.2	5	9.5	8	23.6	878	8,969.1
Darlington	1	20.0	2	2.5	11	50.1	113	557.4	74	408.2	3	20.3	1	1.5	32	34.4	16	40.2	253	1,134.6
Dillon	1	5.0	3	21.2	15	31.6	36	268.3	66	340.5	6	8.3	1	.2	5	1.7	3	10.2	136	687.0
Dorchester	1	8.0	—	—	9	49.0	59	551.4	385	4,324.8	9	9.5	—	—	2	14.0	1	5.0	466	4,961.7
Edgefield	2	50.2	—	—	27	117.7	19	92.1	6	1.0	4	5.8	4	43.8	1	.1	5	12.5	68	323.2
Fairfield	1	75.0	4	5.7	20	59.6	37	137.9	31	371.4	20	35.8	2	1.5	8	16.4	9	18.0	132	721.3
Florence	2	1.1	3	16.3	13	20.8	116	371.6	472	5,660.0	8	39.4	8	10.6	16	35.1	12	104.8	650	6,259.7
Georgetown	2	603.0	—	—	3	1.7	128	1,280.0	353	6,698.9	18	37.8	—	—	10	40.3	1	.1	515	8,661.8
Greenville	1	2.0	2	.5	22	46.7	30	95.7	13	137.5	9	70.8	1	2.5	3	4.7	7	34.1	88	394.5
Greenwood	2	125.1	—	—	47	110.6	30	26.0	10	24.7	21	44.5	7	10.2	48	51.9	20	91.2	185	484.2
Hampton	1	1.0	—	—	4	10.7	85	427.9	124	510.7	7	39.2	5	1.3	7	12.7	6	3.0	239	1,006.5
Horry	—	—	5	24.1	18	68.6	120	678.8	311	5,034.2	26	36.4	—	—	22	100.3	21	29.2	523	5,971.6
Jasper	3	200.0	1	2.0	4	3.3	61	927.9	510	6,158.9	4	2.6	6	12.1	1	15.0	—	—	590	7,321.8
Kershaw	14	65.1	4	16.8	15	108.1	26	472.5	40	222.6	11	536.9	5	7.7	4	100.9	5	2,376.6	124	3,907.2
Lancaster	—	—	—	—	18	51.6	26	90.3	35	311.9	4	179.2	1	40.0	16	52.3	12	39.7	112	765.0
Laurens	—	—	—	—	39	56.1	19	58.4	22	96.0	5	3.5	21	328.4	7	28.2	6	20.8	119	591.4
Lee	1	.2	—	—	—	—	44	345.6	87	901.9	1	10.0	—	—	4	37.8	5	13.2	142	1,308.7
Lexington	7	62.5	6	32.3	19	28.2	172	216.3	159	248.4	27	94.2	20	18.6	35	16.1	22	26.8	467	743.4
Marion	1	300.0	2	2.0	19	192.1	49	275.3	36	1,992.7	7	29.9	3	1.2	6	4.6	8	158.9	131	2,956.7
Marlboro	2	26.5	1	2.0	39	143.2	44	176.5	53	139.7	2	1.1	5	1,605.6	6	8.8	12	19.5	164	2,122.9
McCormick	4	3.5	1	.4	6	39.9	13	14.4	13	22.5	5	19.1	2	43.5	3	.8	15	94.0	62	238.1
Newberry	—	—	2	1.8	11	24.3	35	88.7	6	43.4	4	2.0	—	—	4	4.0	6	12.4	68	176.6
Oconee	—	—	1	10.0	3	5.0	5	20.6	18	119.9	5	25.9	—	—	1	.7	7	19.5	40	201.6
Orangeburg	—	—	2	9.1	57	167.9	195	1,124.9	377	3,185.4	13	97.2	4	4.4	17	25.1	17	17.9	682	4,631.9
Pickens	—	—	2	4.5	8	14.4	19	38.8	14	35.0	13	42.5	—	—	5	13.2	6	15.2	67	163.6
Richland	1	.1	1	96.0	35	99.1	117	508.1	115	821.3	6	140.5	1	2.0	32	70.5	5	10.2	313	1,747.8
Saluda	—	—	—	2.0	11	12.1	12	39.9	4	4.4	1	2.5	—	—	1	.3	6	2.9	35	64.1
Spartanburg	—	—	1	30.0	14	66.0	22	118.5	12	48.0	5	20.0	2	2.0	7	20.5	1	8.0	64	313.0
Sumter	2	2.6	—	—	9	83.0	54	458.1	149	1,335.1	6	88.0	1	.5	11	27.7	34	151.6	266	2,146.6
Union	2	3.5	—	—	21	68.5	15	147.4	6	102.3	2	5.0	3	15.0	4	129.0	3	7.0	56	477.7
Williamsburg	1	2.0	1	1.0	—	—	139	388.9	921	7,572.4	23	314.1	2	1.2	6	3.0	1	8.0	1,094	8,290.6
York	1	.1	3	7.0	15	36.6	42	91.1	21	80.9	10	112.9	7	39.0	24	29.2	11	6.7	134	403.5
TOTAL	94	1,920.9	59	342.1	767	4,177.5	2,610	15,770.3	7,599	72,708.3	380	3,064.6	136	2,296.5	452	1,218.5	390	3,922.9	12,487	105,421.6



# NON-FOREST LAND FIRES BY COUNTY AND CAUSE

## FISCAL YEAR 1984-85

County	Lightning		Campfire		Smoking		Debris Burning		Incendiary		Equipment Use		Railroad		Children		Misc.		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Abbeville	—	—	—	—	5	5.2	8	6.2	4	8.7	5	6.4	7	2.0	2	2.0	2	1.7	33	32.2
Aiken	—	—	—	—	6	56.6	28	214.9	12	70.3	7	13.6	—	—	3	39.0	1	.6	57	395.0
Allendale	—	—	—	—	3	1.1	1	23.0	—	1.0	2	3.6	—	—	—	—	—	—	6	28.7
Anderson	—	—	—	—	15	81.0	10	59.9	9	108.5	3	30.0	—	—	2	12.0	3	98.5	42	389.9
Bamberg	—	—	—	—	1	14.0	8	26.8	10	28.0	4	26.1	—	—	4	6.5	—	—	27	101.4
Barnwell	1	3.2	—	—	5	10.1	14	99.4	19	35.7	6	20.1	—	—	5	10.0	2	24.3	52	202.8
Beaufort	—	—	—	—	1	3.0	31	172.7	57	268.1	2	10.2	—	—	2	11.9	—	—	93	465.9
Berkeley	—	—	—	—	—	—	4	16.5	26	777.1	—	—	—	—	—	—	—	—	30	793.6
Calhoun	—	—	1	.2	9	28.4	15	38.9	—	—	13	10.4	—	—	1	.2	2	.3	41	78.4
Charleston	—	—	—	—	—	4.0	8	43.0	26	469.0	1	5.0	—	—	1	5.0	5	5.7	41	581.7
Cherokee	—	—	—	—	19	12.9	15	11.7	18	68.8	3	2.4	1	.3	3	5.4	3	1.2	62	102.7
Chester	—	—	—	2.0	—	.5	9	21.4	12	13.3	4	9.3	—	—	—	—	3	2.8	28	49.3
Chesterfield	1	3.6	—	—	12	126.3	22	53.0	2	8.5	2	21.0	2	.3	6	13.5	3	29.2	50	255.4
Clarendon	—	—	1	.2	19	7.9	13	26.4	55	363.1	4	5.0	—	—	2	.6	—	—	94	403.2
Colleton	—	—	—	—	2	17.5	18	114.7	61	612.4	4	9.3	—	—	—	—	1	.2	86	754.1
Darlington	—	—	—	—	3	10.1	15	58.6	5	19.6	5	1.8	—	—	—	—	5	3.8	33	93.9
Dillon	—	—	1	40.0	8	9.5	1	.3	8	29.0	1	.1	—	—	14	5.9	4	2.4	37	87.2
Dorchester	—	—	—	—	28	49.1	14	45.7	27	205.2	2	3.0	—	—	1	12.0	—	—	72	315.0
Edgefield	—	—	—	—	1	1.0	10	32.6	1	1.0	—	—	—	5.0	1	.1	—	—	13	39.7
Fairfield	—	—	1	.1	7	7.9	17	69.2	6	2.7	7	16.7	1	.1	2	.2	5	1.3	46	98.2
Florence	—	—	—	—	4	7.4	8	51.1	12	168.0	1	2.5	1	2.0	2	2.0	1	17.0	29	250.0
Georgetown	—	—	—	—	1	.1	6	9.6	6	10.4	1	5.7	—	—	1	2.0	—	—	15	27.8
Greenville	—	—	—	—	3	2.5	16	40.6	3	13.1	3	35.2	—	—	1	5.0	3	5.8	29	102.2
Greenwood	—	—	—	—	4	3.3	11	42.7	—	—	5	3.4	3	4.3	5	1.5	4	.7	32	55.9
Hampton	—	—	—	—	1	.1	16	40.9	17	36.6	4	17.4	7	1.9	—	—	3	4.0	48	100.9
Horry	—	—	—	—	—	—	1	5.0	—	—	—	—	—	—	—	—	—	—	1	5.0
Jasper	—	—	—	—	3	.8	12	33.0	49	298.8	1	.2	5	4.8	2	5.1	—	—	72	342.7
Kershaw	2	25.2	2	25.0	7	20.8	7	24.1	2	9.5	2	6.5	2	45.2	1	3.0	3	13.5	28	172.8
Lancaster	—	—	—	—	—	—	1	7.0	—	—	—	—	—	—	—	.2	—	—	1	7.2
Laurens	—	—	—	—	20	41.1	26	85.6	5	2.9	16	59.4	7	4.6	4	11.7	12	62.1	90	267.4
Lee	—	—	—	—	—	—	3	26.0	1	1.0	—	—	1	.2	—	—	—	—	5	27.2
Lexington	—	—	—	—	2	.6	4	5.5	14	9.9	1	.3	—	—	1	10.0	9	8.0	31	34.3
Marion	—	—	—	—	4	3.1	8	70.7	4	11.9	2	16.1	—	.2	4	5.3	2	12.6	24	119.9
Marlboro	—	—	—	—	10	43.1	8	87.8	6	20.0	1	5.0	1	4.0	2	2.0	1	.1	29	162.0
McCormick	1	.1	—	—	1	.1	8	57.2	1	3.6	1	.2	6	.8	1	.1	6	10.4	25	72.5
Newberry	—	—	—	—	—	—	13	33.1	—	—	3	.6	—	—	1	1.5	2	3.6	19	38.8
Oconee	—	—	—	—	—	—	9	26.0	1	3.3	1	11.5	2	.9	2	.4	3	24.8	18	66.9
Orangeburg	—	—	1	.3	23	152.3	31	206.1	29	166.8	6	31.4	1	.1	1	1.0	5	3.9	97	561.9
Pickens	—	—	1	1.0	6	13.4	11	34.5	1	5.2	6	8.3	—	—	—	—	2	5.5	27	67.9
Richland	—	—	1	2.0	4	1.3	17	75.3	7	35.6	1	1.0	1	.1	4	3.9	—	—	35	119.2
Saluda	—	—	1	23.0	4	5.4	12	31.5	—	—	1	.6	—	—	2	.2	6	4.8	26	65.5
Spartanburg	—	—	—	—	6	23.0	14	64.5	11	39.0	2	37.0	—	—	4	13.0	2	30.0	39	206.5
Sumter	—	—	—	—	—	5.5	13	57.3	12	136.6	1	1.0	—	—	1	5.0	37	150.5	64	355.9
Union	—	—	—	—	4	4.0	5	32.3	2	30.1	—	—	—	—	2	9.0	—	—	13	75.4
Williamsburg	—	—	—	—	—	—	5	10.2	8	133.7	1	.1	—	—	2	.6	—	—	16	144.6
York	1	.1	—	—	3	25.5	6	27.5	1	13.6	2	6.0	1	1.1	—	1.5	3	.9	17	76.2
TOTAL	6	32.2	10	93.8	254	799.5	532	2,320.0	550	4,239.6	137	443.4	49	77.9	92	208.3	143	530.2	1,773	8,744.9

# FOREST LAND FIRES BY COUNTY AND CLASS

## FISCAL YEAR 1984-85

County	Class A		Class B		Class C		Class D		Class E		Class F		Class G		Total	
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Abbeville	12	1.7	52	105.5	5	160.0	1	190.0	0	0.0	0	0.0	0	0.0	70	457.2
Aiken	122	16.7	231	477.0	13	264.6	1	72.0	0	0.0	0	0.0	0	0.0	367	830.3
Allendale	15	2.4	104	370.5	12	380.5	0	0.0	0	0.0	0	0.0	0	0.0	131	753.4
Anderson	1	0.2	78	189.3	18	483.6	1	114.0	0	0.0	0	0.0	0	0.0	98	787.1
Bamberg	44	6.8	99	230.0	10	202.0	2	406.0	0	0.0	0	0.0	0	0.0	155	844.8
Barnwell	19	2.7	63	190.2	8	252.7	0	0.0	0	0.0	0	0.0	0	0.0	90	445.6
Beaufort	30	4.5	154	386.0	21	619.0	3	269.0	0	0.0	0	0.0	0	0.0	208	1,278.5
Berkeley	52	3.8	650	1,838.7	185	4,508.1	5	805.0	2	1,521.0	0	0.0	0	0.0	874	8,676.6
Calhoun	14	2.1	55	123.2	10	273.0	0	0.0	0	0.0	0	0.0	0	0.0	79	398.3
Charleston	12	1.8	304	975.1	66	1,993.0	3	455.0	1	709.0	1	1,900.0	0	0.0	387	6,033.9
Cherokee	24	4.6	68	119.4	8	167.0	0	0.0	0	0.0	0	0.0	0	0.0	100	291.0
Chester	10	1.4	43	115.0	6	132.4	0	0.0	0	0.0	0	0.0	0	0.0	59	248.8
Chesterfield	47	7.0	129	268.0	12	364.7	1	166.0	0	0.0	0	0.0	0	0.0	189	805.7
Clarendon	91	9.8	587	1,673.7	133	3,054.5	6	685.0	0	0.0	0	0.0	0	0.0	817	5,423.0
Colleton	79	10.9	610	1,716.2	181	4,758.0	6	754.0	1	580.0	1	1,150.0	0	0.0	878	8,969.1
Darlington	67	10.9	160	343.7	25	580.0	1	200.0	0	0.0	0	0.0	0	0.0	253	1,134.6
Dillon	42	5.9	74	164.1	19	367.0	1	150.0	0	0.0	0	0.0	0	0.0	136	687.0
Dorchester	15	2.3	347	1,142.4	100	2,762.0	1	130.0	3	925.0	0	0.0	0	0.0	466	4,961.7
Edgefield	20	2.9	39	96.3	9	224.0	0	0.0	0	0.0	0	0.0	0	0.0	68	323.2
Fairfield	39	5.1	82	176.2	10	330.0	1	210.0	0	0.0	0	0.0	0	0.0	132	721.3
Florence	81	11.7	440	1,143.0	116	3,260.0	13	1,845.0	0	0.0	0	0.0	0	0.0	650	6,259.7
Georgetown	150	19.1	296	660.2	56	1,285.5	6	973.0	5	3,513.0	2	2,211.0	0	0.0	515	8,661.8
Greenville	13	2.2	64	154.3	11	238.0	0	0.0	0	0.0	0	0.0	0	0.0	88	394.5
Greenwood	87	12.8	87	140.4	10	206.0	1	125.0	0	0.0	0	0.0	0	0.0	185	484.2
Hampton	53	7.3	162	404.2	24	595.0	0	0.0	0	0.0	0	0.0	0	0.0	239	1,006.5
Horry	82	11.5	361	948.1	74	1,792.0	5	720.0	0	0.0	1	2,500.0	0	0.0	523	5,971.6
Jasper	75	10.5	373	1,042.2	125	3,289.1	16	2,480.0	1	500.0	0	0.0	0	0.0	590	7,321.8
Kershaw	18	3.0	89	206.0	13	345.2	1	100.0	2	885.0	1	2,368.0	0	0.0	124	3,907.2
Lancaster	10	1.9	88	219.1	13	369.0	1	175.0	0	0.0	0	0.0	0	0.0	112	765.0
Laurens	25	3.4	78	143.9	15	336.1	1	108.0	0	0.0	0	0.0	0	0.0	119	591.4
Lee	5	0.8	94	313.9	43	994.0	0	0.0	0	0.0	0	0.0	0	0.0	142	1,308.7
Lexington	209	27.2	242	389.2	16	327.0	0	0.0	0	0.0	0	0.0	0	0.0	467	743.4
Marion	36	4.7	78	121.0	12	481.0	2	250.0	3	2,100.0	0	0.0	0	0.0	131	2,956.7
Marlboro	46	7.1	101	219.8	16	246.0	0	50.0	0	0.0	1	1,600.0	0	0.0	164	2,122.9
McCormick	18	2.2	37	54.1	7	181.8	0	0.0	0	0.0	0	0.0	0	0.0	62	238.1
Newberry	18	2.9	47	83.4	3	90.3	0	0.0	0	0.0	0	0.0	0	0.0	68	176.6
Oconee	5	0.9	26	54.7	9	146.0	0	0.0	0	0.0	0	0.0	0	0.0	40	201.6
Orangeburg	85	11.8	477	1,413.6	117	2,624.5	3	582.0	0	0.0	0	0.0	0	0.0	682	4,631.9
Pickens	20	2.9	42	86.7	5	74.0	0	0.0	0	0.0	0	0.0	0	0.0	67	163.6
Richland	22	2.9	252	632.9	38	1,012.0	1	100.0	0	0.0	0	0.0	0	0.0	313	1,747.8
Saluda	8	1.1	26	53.0	1	10.0	0	0.0	0	0.0	0	0.0	0	0.0	35	64.1
Spartanburg	0	0.0	58	166.0	6	147.0	0	0.0	0	0.0	0	0.0	0	0.0	64	313.0
Sumter	6	0.7	211	738.4	48	1,257.5	1	150.0	0	0.0	0	0.0	0	0.0	266	2,146.6
Union	0	0.0	49	108.7	5	133.0	2	236.0	0	0.0	0	0.0	0	0.0	56	477.7
Williamsburg	254	28.5	692	1,865.1	137	3,345.0	9	1,574.0	1	478.0	1	1,000.0	0	0.0	1,094	8,290.6
York	39	6.0	85	153.5	10	244.0	0	0.0	0	0.0	0	0.0	0	0.0	134	403.5
TOTAL	2,100	286.6	8,484	22,215.9	1,781	44,905.1	95	14,074.0	19	11,211.0	8	12,729.0	0	0.0	12,487	105,421.6

CLASS A FIRE = .25 acres or less CLASS B FIRE = .26 to 9.9 acres CLASS C FIRE = 10 to 99.9 acres CLASS D FIRE = 100 to 299.9 acres  
 CLASS E FIRE = 300 to 999.9 acres CLASS F FIRE = 1,000 to 4,999.9 acres CLASS G FIRE = 5,000 or more acres

# FOREST LAND FIRES BY COUNTY AND MONTH

## FISCAL YEAR 1984-85

County	July No. Acres		August No. Acres		September No. Acres		October No. Acres		November No. Acres		December No. Acres		January No. Acres		February No. Acres		March No. Acres		April No. Acres		May No. Acres		June No. Acres		Total No. Acres	
Abbeville	—	—	—	—	11	23.7	4	1.5	4	11.9	8	12.9	13	18.6	4	48.3	15	289.8	8	39.5	2	9.0	1	2.0	70	457.2
Aiken	11	18.6	3	6.7	23	79.7	33	83.0	55	83.1	23	71.7	38	49.6	19	43.4	66	259.1	65	77.5	15	25.0	16	32.9	367	830.3
Allendale	1	.8	1	.1	5	14.1	1	1.0	7	9.4	2	8.9	22	44.3	11	16.4	20	227.7	49	248.5	5	52.7	7	129.5	131	753.4
Anderson	—	—	—	—	10	33.7	4	20.9	3	2.8	10	77.5	14	119.3	4	25.5	22	297.1	24	197.6	4	7.5	3	5.2	98	787.1
Bamberg	—	—	—	—	2	.3	1	1.0	8	28.8	28	59.7	32	61.9	15	20.0	42	375.8	19	223.7	2	8.0	6	65.6	155	844.8
Barnwell	1	2.0	—	—	2	14.0	4	14.4	10	18.9	13	75.4	13	95.1	13	49.1	18	106.0	6	31.1	7	9.2	3	30.4	90	445.6
Beaufort	1	2.0	—	—	—	—	—	—	—	—	10	23.3	38	533.2	51	247.1	50	278.4	48	179.1	5	4.8	5	10.6	208	1,278.5
Berkeley	3	16.5	1	2.0	7	104.5	3	6.7	27	90.1	162	1,374.7	173	2,628.6	109	532.8	270	2,621.4	94	1,123.8	19	155.5	6	20.0	874	8,676.6
Calhoun	1	.2	—	—	1	.5	2	5.5	5	6.3	9	24.6	13	33.6	9	44.7	17	188.2	11	59.1	4	3.9	7	31.7	79	398.3
Charleston	—	—	—	—	2	11.0	1	2.0	3	10.2	38	170.4	89	643.5	65	561.6	141	3,767.1	36	841.0	9	23.1	3	4.0	387	6,033.9
Cherokee	2	48.0	3	.6	7	9.6	3	4.6	11	10.8	15	26.4	7	16.0	2	6.5	27	76.3	17	81.7	2	3.3	4	7.2	100	291.0
Chester	—	—	—	—	6	27.2	3	19.0	4	2.7	7	8.0	8	25.9	2	5.1	16	59.7	10	81.7	—	—	3	19.5	59	248.8
Chesterfield	2	2.4	1	1.2	4	5.4	10	6.8	16	21.7	25	58.0	9	17.8	10	183.4	44	191.2	51	232.5	13	81.4	4	4.2	189	805.7
Clarendon	2	4.0	—	—	7	3.8	11	44.4	30	75.5	148	638.4	143	595.5	70	257.9	287	2,950.4	89	584.7	13	131.8	17	136.6	817	5,423.0
Colleton	3	6.5	6	7.9	11	23.3	10	11.5	17	45.4	111	1,226.4	208	3,174.3	130	1,058.8	237	1,788.2	96	1,218.2	28	129.2	21	279.4	878	8,969.1
Darlington	3	1.0	2	.3	6	7.9	8	63.6	23	84.4	42	105.2	23	98.6	15	55.6	65	321.2	44	340.3	13	47.1	9	9.1	253	1,134.6
Dillon	—	—	1	1.0	1	.2	3	3.9	10	13.8	28	53.1	5	32.1	10	125.1	45	308.9	16	87.6	9	43.3	8	18.0	136	687.0
Dorchester	—	—	—	—	5	3.9	2	.3	13	38.9	86	1,303.5	90	895.2	53	422.8	135	1,533.3	61	667.2	20	81.6	1	15.0	466	4,961.7
Edgefield	—	—	—	—	6	8.4	9	60.6	3	4.9	4	29.2	8	11.9	8	18.8	13	96.9	8	33.7	4	6.1	5	52.7	68	323.2
Fairfield	—	—	—	—	7	13.7	9	6.1	29	72.7	7	21.0	10	29.8	8	3.4	29	321.1	23	127.7	5	46.6	5	79.2	132	721.3
Florence	1	.3	1	1.0	7	8.1	8	11.3	58	180.4	143	954.7	71	582.5	36	172.5	193	3,550.3	104	737.9	19	55.0	9	5.7	650	6,259.7
Georgetown	2	2.1	7	47.9	5	3.6	5	13.5	17	16.1	36	108.1	71	270.0	64	276.1	214	3,912.5	63	2,118.1	19	115.9	12	1,777.9	515	8,661.8
Greenville	—	—	—	—	3	25.0	6	6.7	5	9.6	1	2.8	9	46.4	6	30.7	32	200.4	23	69.2	3	3.7	—	—	88	394.5
Greenwood	2	.4	1	.1	9	1.8	12	2.1	6	.9	28	15.4	31	63.2	15	8.1	41	159.4	20	57.2	10	37.1	10	138.5	185	484.2
Hampton	3	5.2	—	—	1	25.0	1	2.0	13	20.6	16	82.4	47	282.8	44	182.0	71	269.7	29	120.5	8	8.3	6	8.0	239	1,006.5
Horry	2	2.0	10	23.3	12	29.7	23	22.9	28	122.1	70	231.6	55	199.1	48	176.7	127	1,252.3	83	3,342.9	44	445.3	21	123.7	523	5,971.6
Jasper	6	210.3	—	—	3	31.1	3	7.1	12	164.4	47	178.2	205	3,561.3	93	977.2	156	1,792.4	51	318.3	9	66.2	5	15.3	590	7,321.8
Kershaw	2	4.3	2	.8	7	35.1	5	12.2	9	23.6	7	14.6	9	30.2	9	67.8	42	3,115.8	22	586.2	4	5.7	6	10.9	124	3,907.2
Lancaster	1	1.0	1	.2	3	4.0	2	2.5	4	7.0	13	25.7	21	53.7	7	14.2	36	381.2	23	274.0	—	—	1	1.5	112	765.0
Laurens	2	6.2	—	—	11	21.9	2	.4	12	15.1	11	13.2	14	108.5	5	13.7	35	282.4	15	84.5	4	4.5	8	41.0	119	591.4
Lee	—	—	—	—	1	1.0	4	11.5	13	65.0	23	323.3	23	155.6	4	32.2	51	509.3	20	195.3	1	8.0	2	7.5	142	1,308.7
Lexington	5	17.9	3	.5	17	13.6	19	43.8	33	25.3	77	157.8	87	117.8	37	39.0	103	232.8	42	42.9	29	33.7	15	18.3	467	743.4
Marion	—	—	—	1.0	4	3.2	1	1.5	11	106.9	24	129.5	11	58.1	3	4.6	32	732.4	33	1,910.7	6	5.1	6	3.7	131	2,956.7
Marlboro	3	1.3	1	4.0	5	4.2	9	11.4	9	24.2	21	101.7	12	50.6	9	35.0	67	129.4	18	1,690.5	3	8.1	7	62.5	164	2,122.9
McCormick	—	—	1	.5	4	17.1	6	43.8	15	56.2	2	1.5	5	81.6	4	5.0	7	10.7	6	6.6	5	.7	7	14.4	62	238.1
Newberry	—	—	—	—	7	9.5	5	10.4	4	10.9	11	8.7	15	19.0	3	13.5	12	58.2	8	45.9	1	.2	2	.3	68	176.6
Oconee	—	—	—	—	1	.1	—	—	1	2.0	1	1.0	6	54.0	1	17.5	19	113.2	11	13.8	—	—	—	—	40	201.6
Orangeburg	4	9.2	1	.2	5	10.2	11	22.2	26	64.7	106	412.4	105	658.6	55	313.7	222	1,963.2	103	900.3	27	109.2	17	168.0	682	4,631.9
Pickens	—	—	—	—	3	1.0	3	4.0	4	3.1	—	—	7	37.1	4	10.5	26	72.5	18	33.7	1	2	1	1.5	67	163.6
Richland	1	5.0	2	.6	16	12.9	9	26.0	23	229.3	40	270.3	49	405.7	18	101.5	105	557.5	39	128.6	3	2.6	8	7.8	313	1,747.8
Saluda	—	—	—	—	1	.1	5	4.9	8	15.0	—	2.0	6	5.6	1	.5	7	20.8	5	14.6	2	.6	—	—	35	64.1
Spartanburg	—	—	—	—	3	8.0	2	10.0	—	—	1	6.0	7	37.0	6	31.0	27	175.0	14	34.0	1	8.0	3	4.0	64	313.0
Sumter	1	2.5	—	—	9	51.4	3	3.2	12	46.4	46	328.0	42	224.4	16	275.8	95	918.9	32	204.9	4	33.6	6	57.5	266	2,146.6
Union	—	—	1	.3	7	11.5	2	4.5	5	9.0	2	6.5	5	6.5	4	7.3	17	159.8	10	267.8	1	1.0	2	3.5	56	477.7
Williamsburg	1	2.0	1	6.0	—	—	6	35.8	42	88.8	189	424.3	184	922.4	136	701.0	374	4,948.0	135	1,037.0	19	109.1	7	16.2	1,094	8,290.6
York	1	1.0	1	.2	11	13.7	5	4.1	5	6.2	5	1.8	3	5.1	9	23.5	54	261.4	26	48.0	4	5.0	10	33.5	134	403.5
TOTAL	67	372.7	51	106.4	278	727.7	278	674.6	653	1,945.1	1,696	9,170.1	2,056	17,161.6	1,245	7,256.6	3,724	41,837.3	1,728	20,759.6	406	1,935.9	305	3,474.0	12,487	105,421.6

**FOREST LAND FIRES BY CAUSE  
FISCAL YEAR 1984-85**

<i>Causes</i>	<i>Number of Fires</i>	<i>Percent of Total Number</i>	<i>Area Burned (Acres)</i>	<i>Average Area Per Fire (Acres)</i>
Lightning	94	.8	1,920.9	20.4
Campfire	59	.5	342.1	5.8
Smoking	767	6.1	4,177.5	5.4
Debris Burning	2,610	20.9	15,770.3	6.0
Incendiary	7,599	60.9	72,708.3	9.6
Equipment Use	380	3.0	3,064.6	8.1
Railroad	136	1.1	2,296.5	16.9
Children	452	3.6	1,218.5	2.7
Miscellaneous	390	3.1	3,922.9	10.1
<b>TOTALS</b>	<b>12,487</b>	<b>100.00</b>	<b>105,421.6</b>	<b>8.4</b>

**FOREST LAND FIRES BY CAUSE — FIVE YEAR PERIOD  
(Percent of Total)**

<i>Causes</i>	<i>1980-81</i>	<i>1981-82</i>	<i>1982-83</i>	<i>1983-84</i>	<i>1984-85</i>
Lightning	1.2	1.2	1.2	2.8	.8
Campfire	.5	.9	.6	.7	.5
Smoking	9.9	11.3	8.3	8.8	6.1
Debris Burning	21.0	24.3	24.5	24.2	20.9
Incendiary	51.6	45.7	46.7	50.9	60.9
Equipment Use	3.4	5.4	5.1	3.8	3.0
Railroad	4.0	2.5	4.5	1.2	1.1
Children	4.9	4.5	5.7	4.4	3.6
Miscellaneous	3.5	4.2	3.4	3.2	3.1



# FOREST AND NON-FOREST LAND FIRES 1984-85

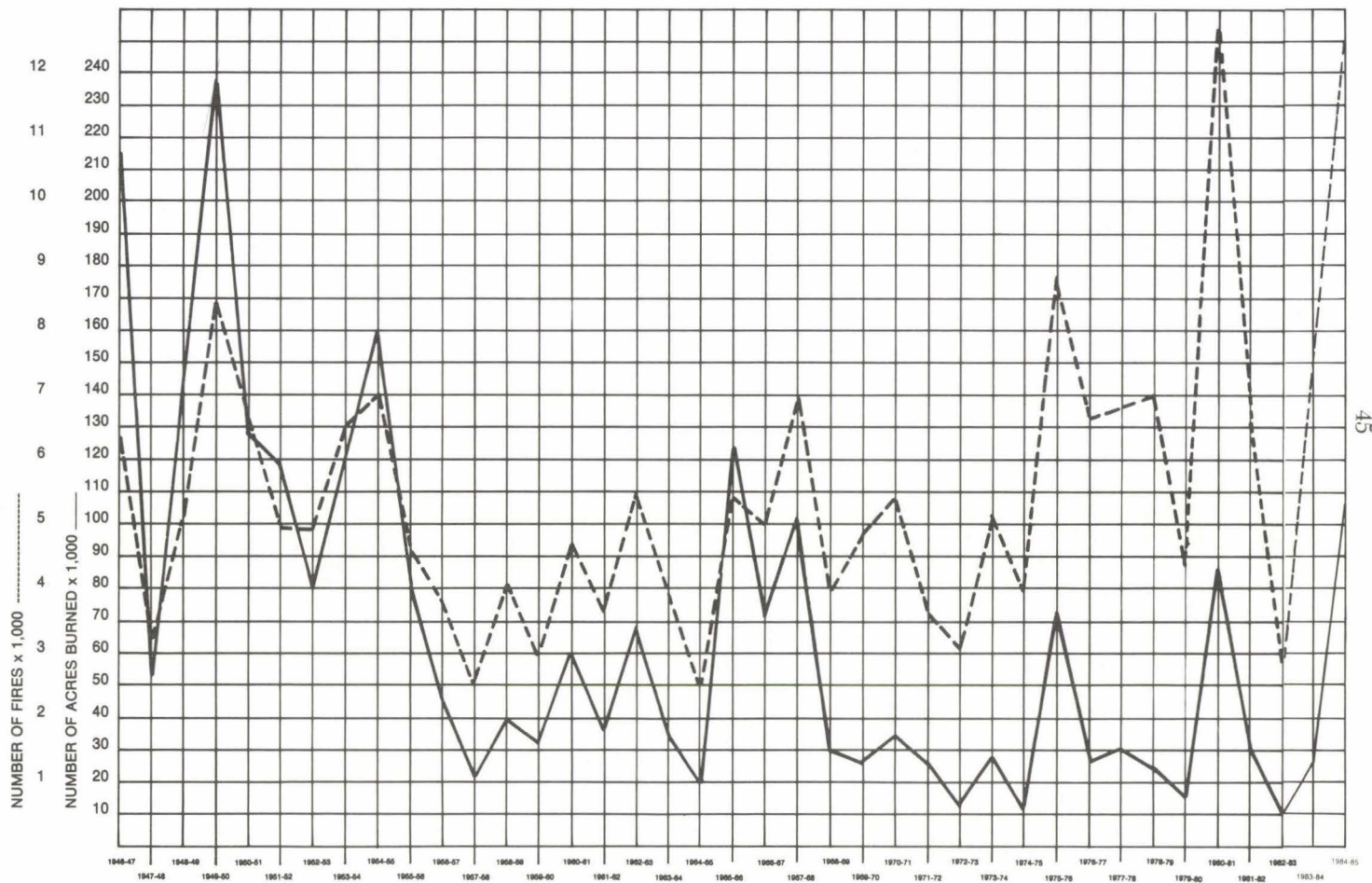
County	FOREST LAND					NON-FOREST LAND		TOTAL ALL LAND	
	Forest Area Protected (Acres)	Number of Fires	Area Burned (Acres)	Percent Area Burned	Average Area Per Fire (Acres)	Number of Fires	Area Burned (Acres)	Number of Fires	Area Burned (Acres)
Abbeville	205,619	70	457.2	.22	6.5	33	32.2	103	489.4
Aiken	433,387	367	830.3	.19	2.3	57	395.0	424	1,225.3
Allendale	156,223	131	753.4	.48	5.8	6	28.7	137	782.1
Anderson	227,594	98	787.1	.34	8.0	42	389.9	140	1,177.0
Bamberg	149,603	155	844.8	.56	5.5	27	101.4	182	946.2
Barnwell	123,617	90	445.6	.36	5.0	52	202.8	142	648.4
Beaufort	153,166	208	1,278.5	.83	6.1	93	465.9	301	1,744.4
Berkeley	391,789	874	8,676.6	2.21	9.9	30	793.6	904	9,470.2
Calhoun	134,105	79	398.3	.29	5.0	41	78.4	120	476.7
Charleston	262,798	387	6,033.9	2.29	15.6	41	531.7	428	6,565.6
Cherokee	162,976	100	291.0	.17	2.9	62	102.7	162	393.7
Chester	283,949	59	248.8	.08	4.2	28	49.3	87	298.1
Chesterfield	355,398	189	805.7	.22	4.3	50	255.4	239	1,061.1
Clarendon	217,876	817	5,423.0	2.48	6.6	94	403.2	911	5,826.2
Colleton	479,853	878	8,969.1	1.86	10.2	86	754.1	964	9,723.2
Darlington	171,141	253	1,134.6	.66	4.5	33	93.9	286	1,228.5
Dillon	145,574	136	687.0	.47	5.1	37	87.2	173	774.2
Dorchester	273,472	466	4,961.7	1.81	10.6	72	315.0	538	5,276.7
Edgefield	208,660	68	323.2	.15	4.8	13	39.7	81	362.9
Fairfield	378,650	132	721.3	.19	5.5	46	98.2	178	819.5
Florence	291,159	650	6,259.7	2.15	9.6	29	250.0	679	6,509.7
Georgetown	381,198	515	8,661.8	2.27	16.8	15	27.8	530	8,689.6
Greenville	315,925	88	394.5	.12	4.5	29	102.2	117	496.7
Greenwood	201,795	185	484.2	.24	2.6	32	55.9	217	540.1
Hampton	247,779	239	1,006.5	.40	4.2	48	100.9	287	1,107.4
Horry	496,547	523	5,971.6	1.20	11.4	1	5.0	524	5,976.6
Jasper	317,032	590	7,321.8	2.30	12.4	72	342.7	662	7,664.5
Kershaw	403,461	124	3,907.2	.96	32.5	28	172.8	152	4,080.0
Lancaster	242,709	112	765.0	.31	6.8	1	7.2	113	772.2
Laurens	294,516	119	591.4	.20	5.0	90	267.4	209	858.8
Lee	122,845	142	1,308.7	1.06	9.2	5	27.2	147	1,335.9
Lexington	284,158	467	743.4	.26	1.6	31	34.3	498	777.7
Marion	217,136	131	2,956.7	1.36	22.6	24	119.9	155	3,076.6
Marlboro	175,333	164	2,122.9	1.21	12.9	29	162.0	193	2,284.9
McCormick	134,484	62	238.1	.17	3.8	25	72.5	87	310.6
Newberry	262,111	68	176.6	.06	2.6	19	38.8	87	215.4
Oconee	215,041	40	201.6	.09	5.0	18	66.9	58	268.5
Orangeburg	376,278	682	4,631.9	1.23	6.8	97	561.9	779	5,193.8
Pickens	228,839	67	163.6	.07	2.4	27	67.9	94	231.5
Richland	288,854	313	1,747.8	.60	5.6	35	119.2	348	1,867.0
Saluda	194,122	35	64.1	.03	1.8	26	65.5	61	129.6
Spartanburg	292,516	64	313.0	.10	4.9	39	206.5	103	519.5
Sumter	240,153	266	2,146.6	.89	8.1	64	355.9	330	2,502.5
Union	220,583	56	477.7	.21	8.5	13	75.4	69	553.1
Williamsburg	392,392	1,094	8,290.6	2.11	7.6	16	144.6	1,110	8,435.2
York	278,674	134	403.5	.14	3.0	17	76.2	151	479.7
Total	12,031,090	12,487	105,421.6	.88	8.4	1,773	8,744.9	14,260	114,166.5

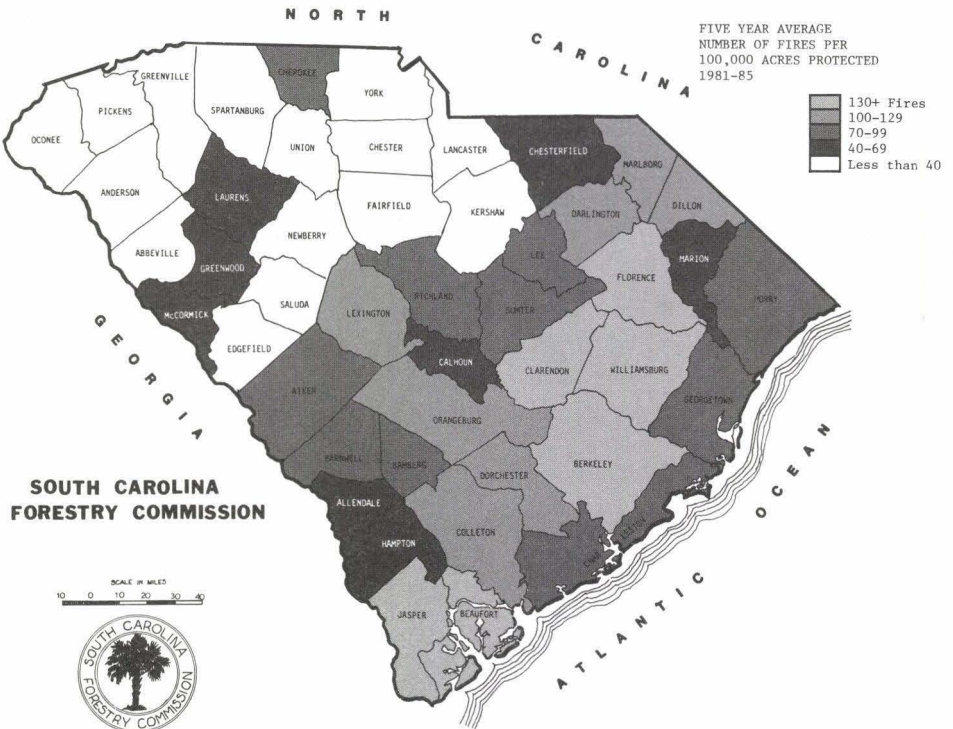
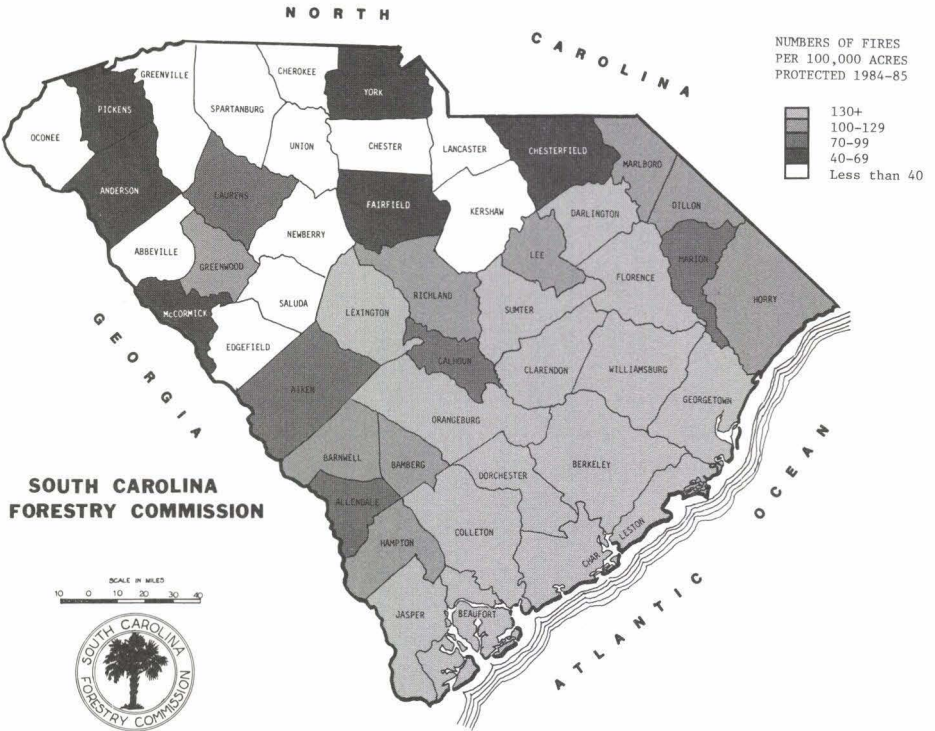


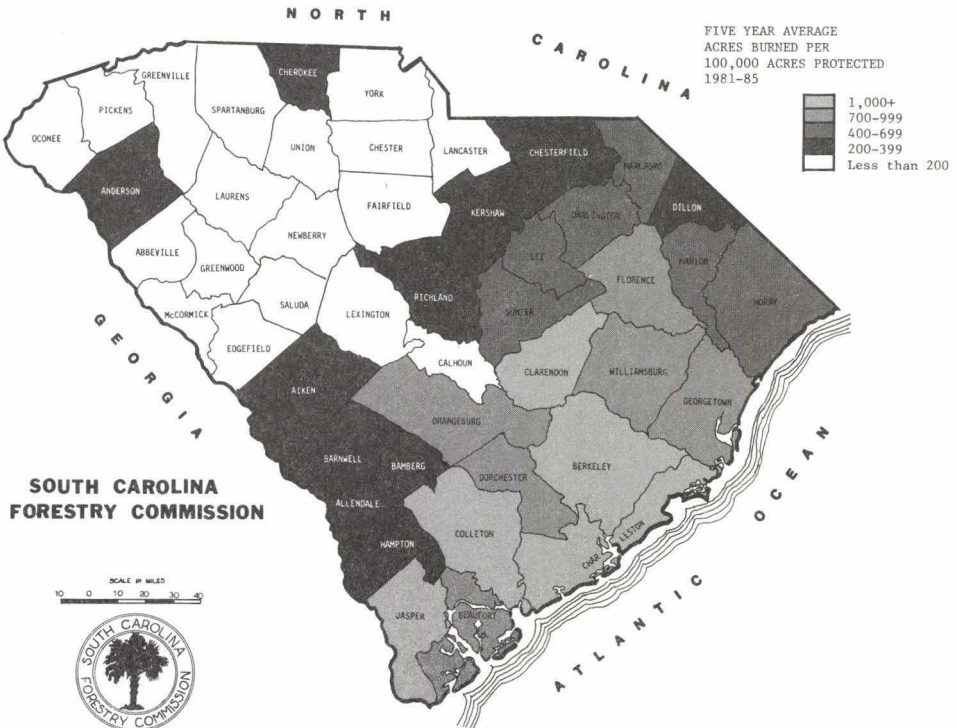
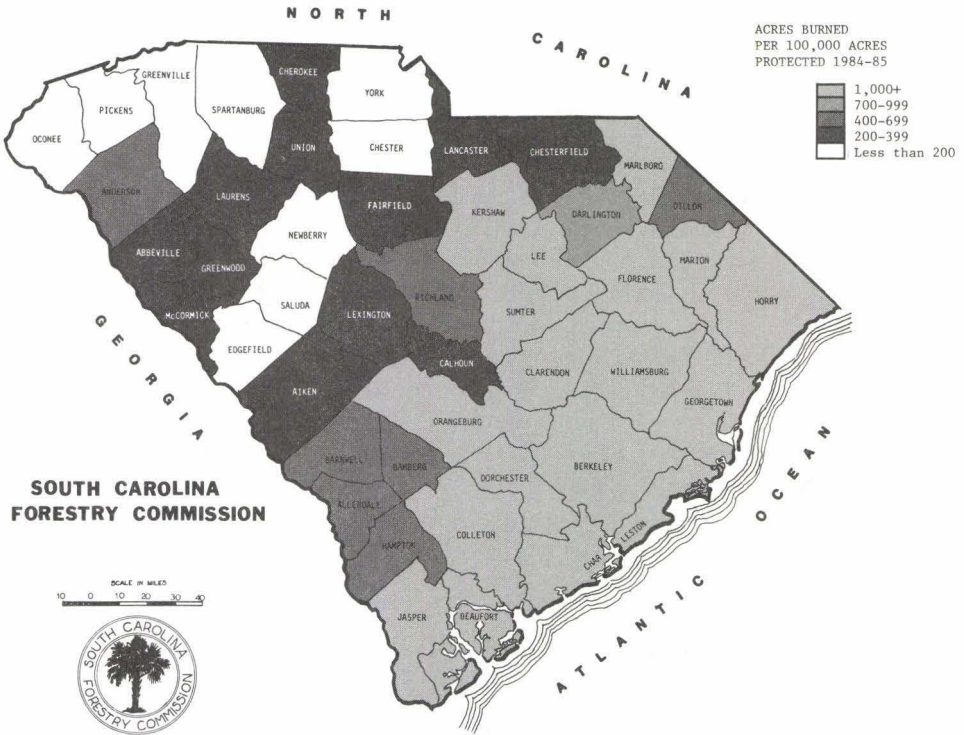
# FIVE YEAR SUMMARY — FIRE STATISTICS

<i>Fiscal Year</i>	<i>FOREST LAND</i>					<i>NON-FOREST</i>		<i>ALL LANDS</i>	
	<i>Total Area Protected</i>	<i>Number Forest Land Fires</i>	<i>Acres Forest Land Burned</i>	<i>Forest Land % Area Burned</i>	<i>Average Acres Per Forest Fire</i>	<i>Number Non-Forest Fires</i>	<i>Acres Non-Forest Burned</i>	<i>Total No. All Lands Fires</i>	<i>Total Acres</i>
1980-81	12,031,090	12,734	89,431.1	.79	6.6	1,671	5,477.9	14,405	94,909.0
1981-82	12,031,090	6,459	28,868.8	.27	4.5	1,290	3,840.8	7,334	32,709.6
1982-83	12,031,090	2,572	7,825.1	.06	3.0	588	1,325.4	3,160	9,150.5
1983-84	12,031,090	5,137	23,378.4	.19	4.6	949	3,272.1	6,086	26,650.5
1984-85	12,031,090	12,487	105,421.6	.88	8.4	1,773	8,744.9	14,260	114,166.5
Five Year Average	12,031,090	7,878	50,985.0	.44	5.4	1,254	4,532.2	9,049	55,517.2

# FOREST LAND FIRES AND ACREAGE BURNED IN SOUTH CAROLINA 1946-1985









## NURSERIES AND TREE IMPROVEMENT SECTION

### NURSERIES

The Forestry Commission operates four forest tree nurseries for the production of seedlings for South Carolina landowners. Commission nurseries grew and distributed 51,635,770 seedlings during the 1984-85 planting season. Of these, 1,695,500 were shipped out-of-state after all orders from South Carolina landowners were filled.

South Carolina's wood using industries planted 67,243,811 seedlings. These consisted of 41,440,811 grown in the state by industry nurseries, 11,162,000 grown by Commission nurseries, while 14,641,000 were brought in by industry and the U. S. Forest Service. A grand total of 106,022,081 seedlings were planted in the state during the year.

Twenty different tree species were grown at the state nurseries with 89% of these being genetically improved. Although the Commission was able to meet most seedling demands, the supplies of a few species were exhausted before transplanting began.

This Spring, seeds were planted to grow 72.9 million seedlings for the 1985-86 planting season.

#### *Seedling Survival*

Survival checks were made on 10% of seedlings planted in 1983-84 on non-industry land ownerships. Field reports indicated 78% average survival. Based on 150,000 acres of reforestation annually each % increase in survival can mean \$2,250,000 in increased stumpage revenue.

#### Number of Landowners by Percent Survival Class

<i>District</i>	<i>0-49</i>	<i>Survival % 50-70</i>	<i>71-100</i>	<i>Total Number Plantings</i>
Camden	3	14	34	51
Florence	6	8	20	34
Kingstree	1	4	40	45
Newberry	4	7	25	36
Orangeburg	4	11	32	47
Spartanburg	9	8	30	47
Walterboro	0	2	22	24
State	27	54	203	284

#### Research

The Forestry Commission continues cooperative research projects with Clemson University, Auburn University and the U. S. Forest Service. The Commission also maintains membership in the North Carolina State Tree Improvement and Hardwood Research Cooperative and the Auburn University Southern Forest Nursery Management Cooperative.



### Containerized Seedlings

Specialized needs existed for seedlings other than bare root stock grown at Commission nurseries. To meet these needs, a double bay greenhouse was constructed in 1982 at Creech Seed Orchard, Wedgefield. This greenhouse and associated slathouses give the Commission the capacity to grow one million containerized seedlings annually.

The first crop of 130,000 was distributed to landowners in June 1983. Distribution of the current crop, 628,215, will be completed in July, 1985 and consist of improved coastal and piedmont loblolly pine, improved longleaf pine, pitch-loblolly pine cross and dawn redwood.

In July and October 1985, 780,000 cavities will be seeded to improved coastal and piedmont loblolly, virginia, longleaf and pitch pine. These will be sold for \$51 per thousand and will be ready for outplanting beginning in March, 1986.

### Forest Tree Seed Collection Program

Each year the Forestry Commission collects or purchases pine cones and other seed for seedling production. Field office personnel play a vital role in the collection program. During the past year walnut, baldcypress, redcedar, yellow poplar, improved virginia and loblolly pine were purchased.

Genetically improved piedmont (144 pounds) and coastal loblolly (300 pounds) seed were purchased during the year to supplement the Commission's inventory. In addition, 400 pounds of the Commission's improved slash pine were traded with the USFS for 400 pounds of improved white pine.

Yields from Commission seed orchards in 1984-85 were the highest ever.

	<i>Bushels of Cones</i>	<i>Pounds of Seed</i>
Improved Coastal Loblolly .....	2,272	3,119
Improved Coastal Loblolly (disease resistant) .....	99	178
Improved Piedmont Loblolly .....	3,799	6,885
Improved Piedmont Loblolly (disease resistant) .....	263	473
Improved South Carolina Slash .....	623	397
Improved Georgia Slash .....	645	526
Improved Longleaf .....	516	353
Improved Coastal Loblolly (1.5 generation) .....	49	35
Improved Piedmont Loblolly (2nd Generation) .....	47	44
Grand Totals .....	8,313	12,010

It is anticipated that the orchard loblolly seed will produce 85,872,000 seedlings which will be available to South Carolina landowners.

### Seedling Production by Species

#### Commission Nurseries

Improved Coastal Loblolly Pine .....	18,125,600
Regular Coastal Loblolly Pine .....	2,619,600
Improved Piedmont Loblolly Pine .....	26,713,815
Regular Piedmont Loblolly Pine .....	779,500
Longleaf Pine .....	1,114,430
Improved Slash Pine .....	95,100
Improved Virginia Pine .....	1,022,800
Shortleaf Pine .....	41,000
White Pine (2-0) .....	609,250
Pitch Pine .....	22,000
Leyland Cypress .....	5,875
Baldcypress .....	98,100
Arizona Cypress .....	9,500
Redcedar .....	274,000
Yellow Poplar .....	56,000
Improved Sycamore .....	7,500
Sweetgum .....	11,200
Black Walnut .....	23,050
Crepe Myrtle .....	950
Dogwood .....	4,300
Magnolia .....	500
Green Spire .....	1,200
Table Mountain Pine .....	500
TOTAL .....	51,635,770

### CONTAINERIZED SEEDLING PRODUCTION

#### Greenhouse — Creech Seed Orchard

Dawn Redwood .....	7,320
Improved Coastal Loblolly .....	483,640
Improved Piedmont Loblolly Pine .....	95,855
Pitch x Loblolly Hybrid Pine .....	20,000
Longleaf Pine .....	21,400
Total .....	628,215

TREE SEEDLING DISTRIBUTION  
BY  
LANDOWNER CLASSIFICATION  
1984-85

A. *State Nursery Seedlings Planted in the State:*

<i>Land Ownership</i>	<i>Percent of Total</i>	<i>No. Trees Planted</i>
Farmers .....	23	11,618,871
Other Individuals .....	37	18,472,724
Associations and Clubs .....	1	416,750
Lumber Companies .....	1	594,000
Pulp & Paper Companies .....	21	10,568,000
Other Industry .....	7	3,985,000
Schools .....	1	52,500
State Forests .....	1	500,000
Other State Lands .....	1	427,500
City, Town, Government .....	1	177,600
Federal Government .....	4	2,062,500
Christmas Tree Growers .....	2	1,064,825
	<u>100</u>	<u>49,940,270</u>

B. *Seedlings From Other Sources Planted in the State:*

1. *Nurseries in South Carolina*

Champion International .....	6,796,698
International Paper Company .....	13,622,283
Westvaco .....	21,021,830
	<u>41,440,811</u>

2. *Nurseries Outside South Carolina*

Federal Paper Board .....	176,000
Georgia Forestry Commission .....	200,000
Hiwassee Land Company .....	4,615,000
North Carolina Forest Service .....	532,000
U. S. Forest Service .....	2,081,000
Union Camp .....	5,507,000
Weyerhaeuser .....	1,530,000
Total Other Seedlings .....	<u>56,081,811</u>
TOTAL SEEDLINGS PLANTED IN THE STATE .....	<u>106,022,081</u>

C. *State Nursery Seedlings Shipped Out of State* ..... 1,695,500

D. *Seedlings donated to Landowners by Industry  
through the Forest Productivity Program*

1. Union Camp Corporation .....	1,000,000
2. International Paper Company .....	100,000
	<u>1,100,000°</u>

°Included in A above.

**SEEDLING DISTRIBUTION FROM STATE NURSERIES AND  
OTHER SOURCE BY COUNTIES, SPECIES AND AMOUNTS  
1984-85**

<i>County</i>	<i>Improved Coastal Loblolly Pine</i>	<i>Regular Coastal Loblolly Pine</i>	<i>Improved Piedmont Loblolly Pine</i>	<i>Regular Piedmont Loblolly Pine</i>	<i>Slash Pine</i>
Abbeville			2,608,300	500	
Aiken	348,500	299,000	3,745,400		
Allendale	1,052,000	392,000	114,500		
Anderson		34,000	1,064,152	39,500	500
Bamberg	1,193,000	338,000	253,750		
Barnwell	2,392,920	73,000	52,000		
Beaufort	1,099,000	243,500			71,000
Berkeley	3,585,278	360,000			5,000
Calhoun	1,253,500	113,500	77,000		500
Charleston	2,136,417	81,500			
Cherokee			776,000		
Chester	41,000	38,000	1,971,300	4,000	
Chesterfield	777,000	158,000	1,182,500	500	
Clarendon	2,013,760	198,000			
Colleton	5,593,000	603,500			1,000
Darlington	333,000	216,500	45,000		1,500
Dillon	834,450				
Dorchester	1,404,300	430,000			
Edgefield	90,000		2,363,190	25,000	0
Fairfield	20,000		5,278,538	494,000	
Florence	1,137,236	3,000	42,000		500
Georgetown	5,094,730	223,000	2,000		
Greenville			433,500	1,000	
Greenwood			1,861,400	82,000	
Hampton	2,609,000	657,500	78,000		
Horry	1,954,675	49,500			1,500
Jasper	3,531,400	199,000	14,500		500
Kershaw	819,000	116,000	3,278,400	322,500	
Lancaster	50,000		1,486,100	263,500	3,000
Laurens			2,629,615	31,000	
Lee	482,500	203,500	80,200	0	500
Lexington	121,500	1,000	103,500	102,500	
Marion	1,122,500	81,500			
Marlboro	576,145	3,000	240,500	3,500	
McCormick	0	0	2,027,200	50,000	
Newberry			3,167,100	180,000	
Oconee		0	642,000	192,000	
Orangeburg	3,813,500	724,500	40,000		
Pickens			523,500	500	
Richland	540,100	155,100	658,300	467,000	100
Saluda	32,000		1,121,000	767,900	
Spartanburg			491,500	39,000	1,000
Sumter	641,000	268,000	183,100	57,000	5,000
Union			2,108,200	62,500	
Williamsburg	2,720,000	307,000			
York	1,000		1,908,600	23,000	
Sub Totals	49,413,411	6,570,100	42,651,845	3,208,400	91,600
Out of State	334,000	500	1,348,000		
TOTALS	49,747,411	6,570,600	43,999,845	3,208,400	91,600

**SEEDLING DISTRIBUTION FROM STATE NURSERIES AND  
OTHER SOURCE BY COUNTIES, SPECIES AND AMOUNTS  
1984-85**

<i>County</i>	<i>Longleaf Pine</i>	<i>Yellow Poplar</i>	<i>Baldcypress</i>	<i>Black Walnut</i>	<i>Sycamore</i>	<i>White Pine</i>	<i>Virginia Pine</i>
Abbeville			100			4,000	17,000
Aiken	184,500	1,500	1,500	2,000	500	42,500	56,500
Allendale						3,000	3,500
Anderson	1,000	2,500	4,500	3,000		22,500	29,500
Bamberg		8,000				2,500	500
Barnwell	1,000	2,500	2,000			9,500	13,000
Beaufort	500	2,500	1,500	1,050			24,000
Berkeley	269,000		500			1,000	9,500
Calhoun	500		2,500	2,000		5,500	8,500
Charleston	62,500	500	1,000	500		1,500	21,500
Cherokee				500		14,000	12,500
Chester						3,500	5,000
Chesterfield	339,500	500	500	1,000		6,000	9,500
Clarendon	500	3,000		0	500	6,500	17,500
Colleton	5,500		500			2,500	16,500
Darlington	2,500		1,500	1,500		5,000	20,500
Dillon	1,500		500		500	4,000	5,500
Dorchester	1,000		3,500	1,500		3,000	36,000
Edgefield			500	500		10,500	28,000
Fairfield						2,200	3,500
Florence	1,000	1,000	2,500		500	4,500	19,000
Georgetown	30,000	0	250	500		1,500	
Greenville	500	2,000		500		43,000	36,500
Greenwood	500					3,200	14,000
Hampton	3,000			500		3,510	5,500
Horry	500	3,000	250			31,000	17,500
Jasper	0	1,000	0			500	17,500
Kershaw	223,500	4,000	500		500	9,565	25,000
Lancaster		500	500			6,000	19,500
Laurens	1,000	1,000	500	500	500	21,000	44,000
Lee	2,000	0	3,000			2,500	12,500
Lexington	211,000	4,000		500		27,500	66,000
Marion	1,000		41,000	1,000		4,500	13,500
Marlboro	1,000		500	0		2,000	2,000
McCormick	0		0			0	3,000
Newberry		2,000	1,000			6,525	8,500
Oconee	0	500	500	1,000		166,000	11,000
Orangeburg	2,000	1,000	5,500	500		11,000	41,000
Pickens	500	4,500	1,500	2,000	2,500	470,750	21,750
Richland	32,100	1,500	3,500	1,000	1,000	14,500	44,000
Saluda		3,000				9,000	17,000
Spartanburg		500	500	500		42,500	72,750
Sumter	73,500	1,500	3,000	500		13,500	71,000
Union						8,000	11,300
Williamsburg	1,500	2,000	500		500	4,000	14,500
York				500			8,500
Sub Totals	1,454,100	54,000	88,600	23,050	7,500	1,055,250	954,800
Out of State		2,000	10,500			500	
TOTALS	1,454,100	56,000	99,100	23,050	7,500	1,055,750	954,800



**SEEDLING DISTRIBUTION FROM STATE NURSERIES AND  
OTHER SOURCE BY COUNTIES, SPECIES AND AMOUNTS  
1984-85**

<i>County</i>	<i>Redcedar</i>	<i>Arizona Cypress</i>	<i>Sweetgum</i>	<i>Leyland Cypress</i>	<i>Miscellaneous</i>	<i>Totals</i>
Abbeville	1,000					2,630,900
Aiken	12,000		2,000	300	800	4,697,000
Allendale						1,565,000
Anderson	11,000					1,212,152
Bamberg						1,795,750
Barnwell	9,000		500			2,555,420
Beaufort	10,050		1,000			1,454,100
Berkeley	1,075			325		4,231,678
Calhoun	10,500					1,474,000
Charleston	4,600		500		100	2,310,617
Cherokee					2,200	805,200
Chester	40,000			50		2,102,850
Chesterfield	4,500	500	500			2,480,500
Clarendon	4,500					2,244,260
Colleton	3,100				200	6,225,800
Darlington	8,500			500		636,000
Dillon	12,500					858,950
Dorchester	2,020		500	200		1,882,020
Edgefield	7,500			100		2,525,290
Fairfield	1,000			50	100	5,799,388
Florence	9,500	500		300		1,221,536
Georgetown						5,351,980
Greenville	8,250			50		525,300
Greenwood	3,000			300		1,964,400
Hampton	1,020					3,358,030
Horry	10,000	500				2,068,425
Jasper	1,750					3,766,150
Kershaw	5,500	500		150		4,805,115
Lancaster	1,000			250		1,830,350
Laurens	1,000			200		2,730,315
Lee	500	500		225		788,425
Lexington	16,500	2,000	500	200	700	660,400
Marion	2,000					1,267,000
Marlboro	2,000					830,645
McCormick	0					2,080,200
Newberry	3,000		200	400		3,368,725
Oconee	1,000	500			63,000	1,077,500
Orangeburg	13,085			450	500	4,653,035
Pickens	7,250		3,000	200		1,037,950
Richland	18,700	2,500		525		1,939,925
Saluda	1,000			1,000	100	1,952,000
Spartanburg	6,000	500	1,000	100	2,750	658,600
Sumter	10,500	500	500			1,328,600
Union	5,000					2,195,000
Williamsburg	4,000	1,000	1,000			3,056,000
York	76,500	1,500				2,019,600
Sub Totals	350,900	11,000	11,200	5,875	70,450	106,022,081
Out of State						1,695,500
TOTALS	350,900	11,000	11,200	5,875	70,450	107,717,581

## CUMULATIVE TREE PLANTING RECORD — ALL SOURCES

<i>County</i>	<i>Seedlings Planted 1984-85</i>	<i>Grand Total Planted To Date 1929-85</i>	<i>Acres Planted 1929 Thru 6/30/85</i>
Abbeville .....	2,630,900	47,744,087	55,607
Aiken .....	4,697,000	183,615,653	196,630
Allendale .....	1,565,000	67,181,722	73,681
Anderson .....	1,212,152	41,151,894	44,534
Bamberg .....	1,795,750	37,555,759	41,372
Barnwell .....	2,555,420	98,957,146	108,307
Beaufort .....	1,454,100	22,976,745	26,931
Berkeley .....	4,231,678	89,079,809	104,802
Calhoun .....	1,474,000	26,173,620	30,130
Charleston .....	2,310,617	29,665,202	37,239
Cherokee .....	805,200	25,585,879	28,781
Chester .....	2,102,850	62,331,039	95,302
Chesterfield .....	2,480,500	112,791,865	122,863
Clarendon .....	2,244,260	44,742,175	51,896
Colleton .....	6,225,800	91,915,309	121,242
Darlington .....	636,000	27,624,295	31,812
Dillon .....	858,950	18,288,190	21,102
Dorchester .....	1,882,020	53,182,577	62,145
Edgefield .....	2,525,290	50,128,398	59,328
Fairfield .....	5,799,388	72,341,535	85,414
Florence .....	1,221,536	21,254,767	25,704
Georgetown .....	5,351,980	100,777,830	119,545
Greenville .....	525,300	24,560,404	26,683
Greenwood .....	1,964,400	62,302,121	63,936
Hampton .....	3,358,030	75,605,132	87,093
Horry .....	2,068,425	56,440,784	65,453
Jasper .....	3,766,150	70,847,927	82,299
Kershaw .....	4,805,115	154,065,510	168,030
Lancaster .....	1,830,350	54,381,890	62,908
Laurens .....	2,730,315	73,085,080	82,638
Lee .....	788,425	20,421,939	22,556
Lexington .....	660,400	50,681,897	54,684
Marion .....	1,267,000	25,520,705	29,664
Marlboro .....	830,645	41,548,803	46,958
McCormick .....	2,080,200	34,711,375	42,157
Newberry .....	3,368,725	57,991,947	68,739
Oconee .....	1,077,500	28,869,123	31,910
Orangeburg .....	4,653,035	89,961,366	103,490
Pickens .....	1,037,950	23,334,825	25,776
Richland .....	1,939,925	56,612,675	63,414
Saluda .....	1,952,000	31,273,551	38,509
Spartanburg .....	658,600	49,160,424	53,233
Sumter .....	1,328,600	55,665,667	59,999
Union .....	2,195,000	57,247,703	65,795
Williamsburg .....	3,056,000	61,028,489	74,473
York .....	2,019,600	48,788,546	53,851
TOTAL .....	106,022,081	2,629,173,379	3,018,615
Out-of-State .....	1,695,500	74,943,941	—
GRAND TOTAL .....	107,717,581	2,704,117,320	

## CUMULATIVE SEEDLING PRODUCTION

<i>Year</i>	<i>Total Distributed (State Nurseries)</i>	<i>Total Distributed All Sources</i>
1928-29	142,000	142,000
1929-30	148,000	148,000
1930-31	986,000	986,000
1931-32	976,000	976,000
1932-33	996,000	996,000
1933-34	1,031,000	1,031,000
1934-35	7,529,000	7,529,000
1935-36	23,000,000	23,000,000
1936-37	22,000,000	22,000,000
1937-38	11,192,000	11,192,000
1938-39	10,854,000	10,854,000
1939-40	12,244,000	12,244,000
1940-41	21,165,423	21,165,423
1941-42	10,275,037	10,275,037
1942-43	4,742,010	4,742,010
1943-44	5,662,608	5,662,608
1944-45	1,926,840	1,926,840
1945-46	6,402,255	6,402,255
1946-47	1,962,600	1,962,600
1947-48	11,356,990	11,356,990
1948-49	30,338,775	30,338,775
1949-50	29,501,955	29,501,955
1950-51	20,615,315	20,615,315
1951-52	16,619,000	16,619,000
1952-53	22,035,850	32,246,298
1953-54	36,210,100	42,852,314
1954-55	35,373,025	45,182,255
1955-56	34,413,550	42,931,755
1956-57	55,753,600	69,658,736
1957-58	60,846,200	93,369,084
1958-59	123,985,000	166,351,000
1959-60	147,146,365	187,516,418
1960-61	145,609,075	158,330,575
1961-62	71,892,420	83,844,470
1962-63	56,191,241	64,201,541
1963-64	51,445,597	62,423,597
1964-65	49,009,893	60,683,493
1965-66	42,310,685	56,529,185
1966-67	48,575,190	69,597,590
1967-68	39,970,136	58,812,136
1968-69	29,529,285	51,453,285
1969-70	31,415,430	49,202,630
1970-71	31,939,880	54,540,880
1971-72	23,677,925	41,357,225
1972-73	30,977,800	45,239,100
1973-74	28,443,000	42,305,500
1974-75	40,081,500	55,996,500
1975-76	40,664,387	59,063,387
1976-77	39,795,375	59,238,275
1977-78	45,734,500	64,380,200
1978-79	43,009,533	65,936,933
1979-80	46,374,919	76,206,619
1980-81	53,512,622	86,419,513
1981-82	55,727,828	87,793,028
1982-83	47,798,858	86,265,299
1983-84	50,169,612	100,394,312
1984-85	51,635,770	107,717,581
TOTAL	1,962,922,959	2,679,707,522

### Forest Tree Improvement Program

A forest tree improvement program was begun in 1963 by the Forestry Commission to provide genetically improved seed for all loblolly, slash, and longleaf pine seedlings grown in Commission nurseries. This program was expanded in December 1983 with the acquisition of 1,594 acres of land near Tillman in Jasper County. This site, named for C. H. Niederhof, member and former Forestry Commission Chairman, will be the location of the Commission's second and third generation operational orchards.

#### Seed Orchards

Creech Seed Orchard — Wedgefield	
Coastal Loblolly .....	31 acres
Coastal Loblolly (disease resistant) .....	5 acres
Piedmont Loblolly .....	40 acres
Piedmont Loblolly (disease resistant) .....	5 acres
Slash — South Carolina origin .....	21 acres
Slash — Georgia origin .....	22 acres
Longleaf .....	12 acres
Arizona Cypress .....	1.25 acres
Creech Seed Orchard — Manchester State Forest	
Coastal Loblolly — Second Generation .....	10.2 acres
Piedmont Loblolly — Second Generation .....	13.4 acres
Green Savannah Seed Orchard — Manning	
Coastal Loblolly — 1.5 Generation .....	39 acres
Niederhof Seed Orchard — Tillman	
Coastal Loblolly — Second Generation .....	28 acres
Piedmont Loblolly — Second Generation .....	12.7 acres
Total .....	240.55 acres

#### Clone Banks

Coastal Loblolly — New Plantation Selections .....	2.2 acres
Piedmont Loblolly — New Plantation Selections ....	5.8 acres
Total .....	8.0 acres

The Niederhof orchard is targeted for a 150 acre expansion in 1986.

An accelerated breeding program is also underway to determine what parent trees will be best suited for the third generation orchard.

#### Progeny Tests

First generation progeny test plantings have yielded sufficient data to discontinue measurement and maintenance of progeny plantings except for: 1972 and 1975 Piedmont Loblolly Main in Saluda; 1981 Coastal Loblolly Main on Manchester State Forest; the Piedmont Loblolly General Combiner in Saluda and the Coastal Loblolly General Combiner in Marion. Measurement and maintenance of the South Carolina and Georgia slash pine progeny plantings will continue.



## Niederhof Seed Orchard

### *Hunting and Fishing*

Opening Niederhof Seed Orchard to controlled hunting and fishing continues the Forestry Commission's concept of multiple use management of state owned lands. Hunting and fishing rules, regulations and guidelines have been adopted and are being administered by the Forestry Commission.

The following schedule relates to all wildlife activities.

<i>Species</i>	<i>Season</i>	<i>Hunt Days</i>	<i>Hours</i>	<i>Restrictions</i>	<i>Fee</i>
Deer . . . . .	Aug. 18 Dec. 29	Saturday	Dawn-9 A.M. 3 P.M.-Sunset	Still Hunt	\$10
Quail . . . . .	Jan. 1 Feb. 26	Saturday	Dawn Sunset	Max. 3 hunters per party	\$ 5
Turkey . . . . .	Mar. 16 Apr. 27	Saturday	Dawn Sunset	Stalking	\$ 5
Rabbit . . . . .	Jan. 2 Feb. 27	Wednesday	Dawn Sunset	No Dogs	\$ 2.25
Squirrel . . . . .	Jan. 5 Feb. 23	Saturday	Dawn Sunset	No Dogs	\$ 2.25
Dove . . . . .	In season — days announced		Noon Sunset		\$ 2.25
Game Fish . . . . .	Jan. 2 Aug. 14	Saturday	Dawn Sunset	No gasoline motors	\$ 2.25

### Permits Issued and Revenue

	<i>Number Participants</i>	<i>Number of Use Days</i>	<i>Revenue</i>
Deer . . . . .	147	16	\$1,450
Quail . . . . .	32	16	155
Turkey . . . . .	22	11	105
Fish . . . . .	<u>200</u>	<u>18</u>	<u>400</u>
Totals . . . . .	401	61	\$2,110

(includes "gratis" permits issued)  
(No applicants for rabbit, squirrel, or dove)

### *Land Management*

The third generation orchard area is leased by contract over a three year period beginning January 1984 at a rate of \$16.00 per acre based on 268 acres of cultivated land. Revenue from this contract will be \$12,864 with an annual payment of \$4,288. The second generation orchard area is leased by contract from year to year based on orchard development and availability of cultivated land. An additional lease was made on 193 acres that generated \$3,088 (\$16.00 per acre).

In accordance with the South Carolina Code of Laws which states "25% of the gross proceeds from the sale of timber poles, etc. . . . shall be paid to counties containing state forest lands," \$6,107.40 will be paid to Jasper County based on the following sales:

<i>Product</i>	<i>Acres</i>	<i>Board Feet</i>	<i>Cords</i>	<i>Tons</i>	<i>Revenue</i>
Pine .....	15		37.32		\$ 1,044.96
Pine .....	411	199,182	89		20,212.00
Hardwood .....	15		227.05		908.22
Pine Stumps .....	<u>200</u>			550	<u>2,264.41</u>
Totals .....	641	199,182	<u>353.37</u>	550	\$24,429.59

### INFORMATION AND EDUCATION SECTION

The year 1984-85 was a year of intense activity. The I&E Section produced a second grade activity booklet, "You Can Do It" in cooperation with the State Department of Education. In December, a booklet entitled "South Carolina's Forest: Crisis or Opportunity" was produced by the Section. Funded through the U.S. Forest Service, "Crisis or Opportunity" graphically depicted the Forest Service's 1983 interim pine resource survey findings.

A slide-tape program entitled "When a Forest Burns" was produced. The program focuses on a youngster's concern for the forest and the commission's local fire fighting organization. As is the case with most other projects, personnel of the Commission wrote, narrated, and produced the program which took second place honors in the Society of American Forester's Annual Film Festival and was shown at the annual meeting at Fort Collins, Colorado.

In mid-October the Commission celebrated the 40th Anniversary of the Smokey Bear Fire Prevention Campaign with a birthday party at Commission Headquarters. The party included films, prizes, an equipment display, refreshments, and Smokey Bear. Over 1,750 children and teachers attended. Mrs. Ann Riley, wife of the Governor, was a special guest.

In addition to the party, the Smokey Bear program received other recognition. The Post Office issued a commemorative stamp and Columbia Postmaster presented State Forester Kilian with the new issue. A first day cover with the new stamp was issued by the National Association of State Foresters. Smokey visited Children's Hospital in Columbia and made other appearances.

And then fire season began.

As early as mid-December, drought in the lower coastal plain had fire fighters working around the clock. It was to be a memorable fire season — the second highest number of fires in Commission history. The State Forester would invoke a burning ban three times, and the Governor would declare a state of emergency before the season culminated — with over 15,000 acres burned in the three day period ending on Good Friday.

### *Media Communications*

The 1984-85 fire season was extremely hot and would have been newsworthy under any circumstances. However the Section's efforts in recent years to target specific news to specific media audiences improved communications effectiveness. During the year over 430 contacts and reports were made with the media; television, print, and radio. In addition, 159 contacts were made with the Associated Press, United Press International, and various networks. Section personnel wrote 7 feature articles, 38 news releases and prepared 10 releases for distribution at the local level.

A 15-minute and a 30-minute video tape were prepared showing excerpts from news stories of the fire season, and in-house fire footage. The finished tape, with a dissolve slide sequence was shown to Columbia personnel, field supervisors, the Commissioners, the Forester's Council, and Southern Information and Education Chiefs.

Three television spots were produced during the year. Two of the spots focused on particular positions and services: one on a tower attendant in Marion County, the other on the Pickens Project Forester. A spot promoting Arbor Day was also produced.



Coverage of wildfires by local and national media was extensive.

### *Urban forestry*

The Urban Forestry Program provides technical assistance to individuals, groups, and organizations concerning the establishment and care of trees in urban areas.

Urban forestry assistance is available to communities throughout the state through the local forester and the urban forester coordinator in Columbia. Two municipalities have full time urban projects. Accomplishments for FY 1984-85 were:

	<i>Charleston</i>	<i>Columbia</i>
Assists to individuals and agencies .....	585	258
Tree expert referrals .....	150	168
Woodland Examinations number .....	11	5
acres .....	956	—
Timber Marking Assistance Mbf .....	—	—
cords .....	—	55
Prescribed Burned acres .....	387	—
Media Contacts .....	231	10
Garden, Civic Club programs .....	17	56
Workshops, Arbor Day programs .....	1	8

### *Promotion*

The Commission utilizes timely events and organized promotional activities to focus attention on fire prevention, forest management, tree care, and the value of forest products. Some of the special events and programs are:

Arbor Day — in cooperation with Clemson University Extension.

Gold Leaf Award — presented to City of Charleston and Camden Middle School for Arbor Day activities.

Tree City, USA — in cooperation with the Arbor Day Foundation and National Association of State Foresters. Ten cities were recognized. They are:

Cheraw	Spartanburg
Columbia	Summerville
Florence	Greenville
Marion	Sumter
Charleston	Pelion

Tree Farm Program, Project Learning Tree, and Forest Products Week — with the American Forest Institute

Cooperative Forest Fire Prevention Campaign with the National Advertising Council

Southern Cooperative Forest Fire Prevention with the Southern Group of State Foresters

### *Meetings/Training*

Personnel of the Section provided support in a variety of meetings: Natural Regeneration Workshops, Master Tree Farm Training, Southern Forest Insect Work Conference, Urban Forestry Conference, and Community Improvement.

Training was provided in several areas:

- Public Relations Training to tower attendants in all districts and to fire wardens in District 3.
- Fire information officers critique with Assistant District Forester for Protection and Administration.



- Exhibit care and preparation for Assistant District Forester for Protection and Administration.
- Columbia office personnel tour of Sand Hills State Forest and Camden District.

#### *In-House Communication*

Three issues of the Commission Newsletter "Tree Country" were produced.

#### *Exhibits*

The Section prepared a number of portable exhibits during the year. These exhibits focused on a variety of forestry topics: Better Woodlands, Woodlands That Pay, The Southern Pine Beetle, Multiple Use, and SCFFP literature.

#### *Equipment*

A video camera was purchased as a replacement for the video production equipment. Two audio cassette recorder/players with slide dissolve capability were also purchased.

#### *Miscellaneous*

The I&E Section continues to provide audiovisual and photographic support to all segments of the Commission. Graphs, and video and photographic documentation were prepared for a number of persons and a variety of presentations. In outside activities, personnel assisted the Soil Conservation Service and Land Resources Commission in judging Conservation District Awards and the State Conservation Essay.

#### *Sign Shop*

The Sign Shop provides invaluable support to the total Commission program. The Shop Supervisor warehouses and distributes all educational and fire prevention material, and is responsible for two vans used for group transportation of personnel and for transporting exhibits. During the year, the Sign Shop constructed 17 signs (tower, seed orchard, etc.), 4 weather stations, carrier boxes for 2 Christmas tree shearers, and prepared chair rail for the Florence District Office. Exhibits were provided for 11 fairs, and 11 farm-city week exhibits. Additionally, the Sign Shop provides general maintenance and construction support.

# INFORMATION AND EDUCATIONAL SUMMARY 1984-85

	<i>School Programs</i>		<i>Talks</i>		<i>Fire Prevention Programs</i>		<i>Workshops</i>		<i>Arbor Day</i>		<i>Radio</i>	<i>TV</i>	<i>Print</i>	<i>Wire Services Network</i>	<i>Parades</i>	<i>Exhibits</i>
<i>District</i>	<i>#</i>	<i>Attnd.</i>	<i>#</i>	<i>Attnd.</i>	<i>#</i>	<i>Attnd.</i>	<i>#</i>	<i>Attnd.</i>	<i>#</i>	<i>Attnd.</i>						
Camden	9	412	94	3,006	35	1,931	20	3,105	4	76	7	3	34	—	9	4
Florence	11	885	52	1,186	13	405	14	203	3	670	5	1	14	—	10	3
Kingstree	40	2,230	14	213	—	—	2	285	12	1,489	17	1	89	—	6	3
Newberry	32	1,183	65	1,779	6	600	44	1,224	18	1,971	37	2	72	—	17	9
Orangeburg	66	6,034	36	2,369	5	460	12	676	—	—	4	4	45	—	16	1
Spartanburg	59	1,903	45	1,204	10	287	32	1,452	5	120	74	16	114	—	14	6
Walterboro	8	208	21	429	1	24	4	50	1	300	192	192	188	—	3	4
TOTAL (Districts)	255	12,855	327	10,186	70	3,707	128	6,995	43	4,626	336	219	556	—	75	30
State Forests	1	22	5	1,200	1	12	3	51	—	—	1	1	8	—	—	—
Nurseries/Seed Orchard	—	—	6	167	—	—	1	150	—	—	—	2	5	—	—	—
Columbia	1	25	57	1,538	1	1,750	12	714	1	150	13	8	108	159	—	22
GRAND TOTAL	227	12,902	395	13,091	72	5,469	144	7,910	44	4,776	350	230	677	159	75	52

## TRAINING SECTION

The Training Section plans, coordinates, and evaluates the Forestry Commission training in all subject areas.

Each year a training schedule is prepared in cooperation with all program managers. This helps to set priorities and to ensure that needed training is scheduled, planned, and presented in a logical order.

Standard training programs have been prepared for new employees in all job areas. These programs will ensure that all subjects are covered in a logical order and will help the new employee reach the standards for the assigned job as soon as practical. Programs are in use for foresters, district rangers, county rangers, district forest technicians, fire tower operators, wardens, mechanics, radio technicians, staff assistants/clerks, and nurserymen/seed orchard managers.

A training library including manuals, films, tapes, slides, lesson plans, etc., is maintained.

Most training is done using Forestry Commission personnel as instructors. Other schools and instructors are utilized when possible. These sources include the U. S. Forest Service, Clemson University, University of South Carolina, South Carolina State Personnel Training Division, industry representatives, and the South Carolina Criminal Justice Academy.

Training highlights for 1984-85:

*Basic Fire Fighting School*, four days. This was conducted for all new personnel with fire control responsibilities.

*Prescribed Burning School*, two days; attended by eighteen people.

*Basic Law Enforcement* Nine people attended the three-week special basic course at the S. C. Criminal Justice Academy and were commissioned as forest law enforcement officers.

*Law Enforcement In-Service*, two days. This was conducted at the S. C. Criminal Justice Academy for seventy-three personnel who hold law enforcement commissions.

*Herbicide Workshops*, one day — were conducted for Forestry Commission Foresters and Forest Technicians.

*Employee Performance Management System* Two hours of follow-up training was conducted for all supervisory personnel.

*Rural Fire Department Training* This program, conducted by the Forestry Commission to train Rural Fire Department personnel, was presented to twenty-one departments with 127 personnel receiving training.

*Supervisor Skills Workshop* This one day workshop was conducted by instructors from the University of South Carolina for 28 Forestry Commission personnel.

*Ranger Technician Training Program* Eight Forestry Commission employees completed the forest technician training program this year. This program normally requires three years of study, on the

job training, and experience to complete. These employees will assist foresters in providing services, such as timber marking, prescribed burning, and reforestation assistance to private non-industrial woodland owners in the counties where they are assigned.

## INSECT AND DISEASE SECTION

The Insect and Disease Section, in cooperation with the State Plant Pest Regulatory Service and the U. S. Forest Service, maintains a program to detect, evaluate, and suppress forest pests. Through cooperative agreements, these agencies make their technical assistance and advice available to the Forestry Commission.

The current forest pest detection and reporting system involves the reporting by field foresters of forest pests that are causing abnormal losses, require control action, or which may present new problems. Aerial surveys are made periodically for specific pests to determine occurrence and the need for suppression action.

### Major Insect Problems

#### *Southern Pine Beetle*

The southern pine beetle outbreak which began in July 1982 continued through this year. Counties infested by these beetles included Abbeville, Anderson, Berkeley, Charleston, Cherokee, Fairfield, Greenville, Greenwood, Jasper, Kershaw, Lancaster, Laurens, McCormick, Newberry, Oconee, Pickens, Richland, Spartanburg, and Union. Losses to the beetles were heaviest in the northwestern counties. Losses this year were 3,124 cords and 1.5 million board feet of pine valued at \$300,000. Salvage of this timber was fair with 7,650 cords salvaged at a salvage value of \$102,000.

New activity by the beetles began to show up in June, 1985. This activity will be monitored and suppression begun if necessary.

#### *Hardwood Defoliators*

An outbreak of hardwood defoliators which began in 1981 in the Coastal Region continued this year, although many areas reported defoliator population collapses. The Insect and Disease Section worked with Kiawah Plantation (Charleston County) in evaluating a white-marked tussock moth problem.

Post-suppression surveys at Wachesaw Plantation (Georgetown County) and Seabrook Island (Charleston County) showed that last year's treatments were successful.



## Major Disease Problems

### *Pine Tip Blight*

A multiple forking of the terminals on loblolly pine seedlings at Piedmont Nursery was still causing problems this year. The adverse growing season increased the *Phoma* infection and about 50% of the seedlings were affected. This condition has been found at many other nurseries in the Southeast. Planned fungicide and insecticide sprays should minimize damage to the new crop. Meanwhile an outplanting of forked vs. non-forked pines was established to determine if this problem is causing drops in survival or growth rate.

### *Oak Wilt*

Oak wilt disease has been identified in Chesterfield, Kershaw, Lancaster, Lee, and Richland counties. It appears to be static and causing losses only to low value oaks. Since there is potential for loss of valuable trees, including shade trees, periodic surveys are made to evaluate the spread.

### *Dutch Elm Disease*

Dutch Elm disease has been confirmed in Aiken, Anderson, Cherokee, Chester, Chesterfield, Edgefield, Fairfield, Greenville, Greenwood, Kershaw, Lancaster, Laurens, Lexington, Marlboro, Newberry, Oconee, Pickens, Richland, Saluda, Spartanburg, and York counties. It is expected to gradually spread through the state because the primary agent of spread, the smaller European elm bark beetle, occurs statewide.

## Integrated Pest Management

The Forestry Commission, Clemson University, and the U. S. Forest Service began an integrated pest management demonstration project in South Carolina in 1982. During the first phase of this project, the Commission acquired a portable sawmill. The mill is being used to demonstrate the feasibility of salvaging timber from small southern pine beetle spots by sawing the infested wood into lumber at the site of the beetle infestation. Demonstrations of the mill were conducted in the Coastal Plains and Sandhills regions.

## Miscellaneous Insect and Disease Checks

Commission foresters made approximately 1,966 field checks of insect and disease problems and made recommendations for prevention and control. Other inquiries were handled by telephone, mail, and personal contact.

## STATE FORESTS

There are four state forests operated by the Forestry Commission:

Cassatt State Forest (Kershaw County) . . . . .	462 acres
Harbison State Forest (Richland County) . . . . .	2,188 acres
Manchester State Forest (Sumter County) . . . . .	28,830 acres
Sand Hills State Forest (Chesterfield and Darlington Co.) . . . . .	92,000 acres

Prior to acquisition by the state, most of the land included in the state forest system had been heavily cut over and generally misused. The primary efforts since acquisition have been directed to building up the growing stock in existing forest stands, planting submarginal old fields to desirable species of forest trees, developing adequate multiple use and wildlife management programs, and protecting endangered species.

It is the objective of the Forestry Commission to practice the principles of multiple use and sustained yield timber management on forest lands under the agency's jurisdiction and to promote practices to protect and enhance environmental quality in the management of all forest ownerships.

Silvicultural practices are carried out on small blocks interspersed throughout a compartment. Even age management produces compartments representing all age groups of timber, such as: newly-cleared areas favored by doves, quail, and deer; young, dense stands necessary for cover and concealment; and older, more open stands also needed for quail, deer, and the endangered red-cockaded woodpecker. Den trees for squirrels are reserved. Game census reports indicate this method of management produces optimum numbers of game species and timber production with costs of timber management not adversely affected.

### Payment to Counties

Twenty-five percent of the gross receipts of all state forest operations is paid in lieu of taxes to the counties in which the forest is located. This year payments to counties will be:

Chesterfield (Sand Hills State Forest) . . . . .	\$71,039.23
Darlington (Sand Hills State Forest) . . . . .	862.82
Sumter (Manchester State Forest) . . . . .	75,979.30

In the past 27 years since the passage of this Act, the Forestry Commission has paid a total of \$2,854,945.13 to counties where state forest lands are located as follows:

Chesterfield .....	\$1,744,464.18
Darlington .....	38,131.64
Sumter .....	1,006,585.03
Richland .....	57,269.79
Kershaw .....	8,494.49

### **CASSATT STATE FOREST**

Cassatt State Forest, with 462 acres, is located about two miles north of Cassatt, S. C. It was deeded to the State by the late J. R. West on May 28, 1935. Cassatt Lookout Tower and a dwelling for the tower attendant were erected by the Civilian Conservation Corps (CCC) and continue to be used for fire detection.

Sand Hills State Forest personnel maintain a system of boundary firebreaks. Breaks have been plowed around plantations and along the public road which crosses the property. All boundary lines have been marked.

### **HARBISON STATE FOREST**

Harbison State Forest, containing 2,188 acres, is located in Richland County. The Richland County fire control organization is responsible for fire protection. No fires burned on the forest during the year. No timber sales were made in 1984-85.

The implementation of the 1982 Harbison State Forest master plan is continuing. One and one-half miles of public roadway has been surveyed and cleared. A Land and Water Conservation Grant from the Department of Interior has been approved for constructing the road. Plans have also been prepared for the development of an arboretum.

Four Boy Scout Eagle projects were conducted during the year.

### **MANCHESTER STATE FOREST**

Manchester State Forest, located south of Wedgefield in Sumter County, contains 28,830 acres. From 1939 to 1955, this land was leased by the Forestry Commission from the federal government. The state received title to this property on June 28, 1955.

#### **Silvicultural Practices**

There were 273 acres prepared for tree planting by drum chopping and disking. There were 300 acres prescribed burned and 50 acres of longleaf pine were spot treated with herbicide for hardwood control. A total of 277 acres were planted with the following species:

Longleaf pine .....	51,000
Improved coastal loblolly pine .....	101,000

### Forest Protection

Twenty forest fires occurred during the year burning a total of 47.6 acres. Firebreaks were maintained in high value and high hazard areas. Periodic checks were made for insect and disease damage. Research in cooperation with the Southeastern Forest Experiment Station is being conducted on insect and disease prevention.

There were 8 cases prosecuted for forest and game law violations.

- 2 Over bag limit for doves
- 1 Violation of state forest driving regulations
- 1 Dumping trash on state forest
- 1 Destruction of state forest property
- 1 Unauthorized bonfire on state forest
- 1 Burning notification violation
- 1 Negligently allowing fire to escape onto forest
- 2 Nolle Prossed

### Recreation

Recreation other than hunting and fishing includes hiking, berry picking, sightseeing, motorcycling, horseback riding, and field trials. A total of 25 organized group activities were held on the forest involving an estimated 2,624 people.

### Game Management

An intensified program of game management is conducted in cooperation with Sumter County Game & Fish Association and the S. C. Wildlife and Marine Resources Department. Endangered species biologists provided recommendations for managing mature longleaf pine as colony sites and support stands for the red cockaded woodpecker. In addition to utilizing power line right-of-way for wildlife plantings, permanent wildlife fields and food patches have been established. Planting and/or maintenance was carried out on 35 wildlife plots containing 153 acres.

Total receipts for hunting and fishing permits were \$10,745.55.

<i>Game</i>	<i>Number of Permits</i>
Deer .....	1,322
Dove .....	596
Quail .....	365
Rabbit/Squirrel .....	849
Raccoon .....	29
Fox .....	2
Fish .....	1,642

### Land Rentals

#### *Agricultural Lands*

All leases for agricultural lands were changed from annual to three year leases. Eighteen leases were made on 862 acres.



*Shaw Air Force Base*

The U. S. Air Force leases 7,687 acres of the forest for an aerial gunnery range to train pilots from various Air Force bases in the southeastern U. S. The South Carolina Air National Guard has access to the range and uses it frequently.

**Receipts***Receipts for Operating Budget*

Fuelwood — 325 permits, 286 cords . . . . .	\$ 2,944.82
Pinestraw . . . . .	1,009.00
Hunting and Fishing permits . . . . .	<u>10,745.55</u>
TOTAL . . . . .	\$ 14,699.37

*Timber Sale and Other Receipts*

Timber Sales — 1,410,286 board feet, 2,278 cords .	\$255,357.37
Rentals, Leases, and Miscellaneous Sales . . . . .	<u>48,743.63</u>
TOTAL . . . . .	\$304,101.00

**Niederhof Seed Orchard Development Fund**

Payment on Niederhof Seed Orchard Land . . . . .	\$186,000.00
S. C. General Fund Payment . . . . .	108,670.00
Reforestation: equipment, supplies . . . . .	<u>57,904.19</u>
TOTAL . . . . .	\$352,574.19

**SAND HILLS STATE FOREST**

Sand Hills State Forest, located in Chesterfield and Darlington Counties, contains 92,000 acres. Half of the area is administered by the U. S. Fish and Wildlife Service as the Carolina Sandhills National Wildlife Refuge. The Forestry Commission is responsible for forest fire protection and forest management activities on the refuge portion and administers the other half as a multiple use forest. Leased from the federal government for 95 years, the forest became self-supporting in 1966. Revenue accrued over expenses each year is expended on the forest for further improvements and expanded operations.

**Silvicultural Practices**

During the year 617 acres were prescribed burned. Trees were planted on lands that were harvest-cut and site prepared. A total of two hundred sixty-six acres were planted with the following species:

Longleaf . . . . .	151,000
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**Forest Protection**

Forest boundary lines were disked and firebreaks disked along major roads and railroads for fire protection. Twenty wildfires occurred, burn-

ing a total of 83.2 acres. Forest insects and diseases were no problem during the year.

### Recreation

The Sugar Loaf Mountain recreation area continued to receive heavy use. Besides the naturally formed 150 foot high Sugar Loaf Mountain, there are five picnic shelters, a lake, fireplaces, a flowing well, parking areas, and latrines. Scout troops and other organized groups use this area and facilities for overnight camping. Many auto touring visitors drive through this forest, especially to view the fall leaf colors and to enjoy the blooming rhododendron near Sugar Loaf Mountain in the spring. A nature trail is available for hiking. The trail winds through a typical sand hill branch and an undisturbed wooded area containing many species of mature trees. Use by horse riders continues to increase each year. Hitching posts have been erected.

### Game Management

Hunting and fishing are conducted in season by permit on the forest area. Cooperation with the State Wildlife Resources Commission and the U. S. Fish and Wildlife Service was excellent in game law enforcement. Deer, dove, and quail food patches are planted and maintained by the Forestry Commission.

There are thirteen ponds available for fishing on the forest. These are maintained through annual fertilization and weed control. Fishing permits this year totaled 2,800.

Dove, quail, squirrel, deer, and rabbit hunting were permitted on the state forest portion. Permit sales totaled 138 for dove, 66 for squirrel, 475 daily and 4 season quail, 58 daily and 77 two week season for deer, and 10 for rabbit.

### Land Rental

Twenty-one farmland contracts comprising 857 acres were renewed during the year. All of the rented land is planted to corn, beans, grain, or one of the lespedezas. All of these crops benefit the wildlife program.

### Receipts

Pulpwood	6,826 cords Pine	
	798 tons Hardwood	\$151,733.38
Fuelwood	81½ cords	978.00
Rentals		9,294.21
Hunting and fishing permits		8,271.00
Straw		18,695.97
Miscellaneous		1,247.71
TOTAL		\$190,220.27

## STATE LANDS FOREST MANAGEMENT PROGRAM

The state lands forest management program provides technical forest management assistance to S. C. state agencies which own forest land.

During fiscal year 1984-85, six agencies requested and received forestry assistance. Forest product sales totaled 719,650 board feet of sawtimber and 3,195.5 cords of pulpwood for an income of \$120,772.60. Seventy acres were site prepared for tree planting and 198 acres were planted with tree seedlings.

In addition to the listed timber sales the following is a breakdown by agencies of work accomplished during 1984-85:

*John de la Howe School* — Assisted in the preparation of a plan for locating a school wilderness camp.

*Dept. of Mental Retardation* — Prepared a tree maintenance plan for Whitten Center campus and street trees. Located the site for the planting of 50 street and campus trees.

*Department of Corrections* — Revised the management plan for the 1,795 acres at Wateree River Correctional Farm.

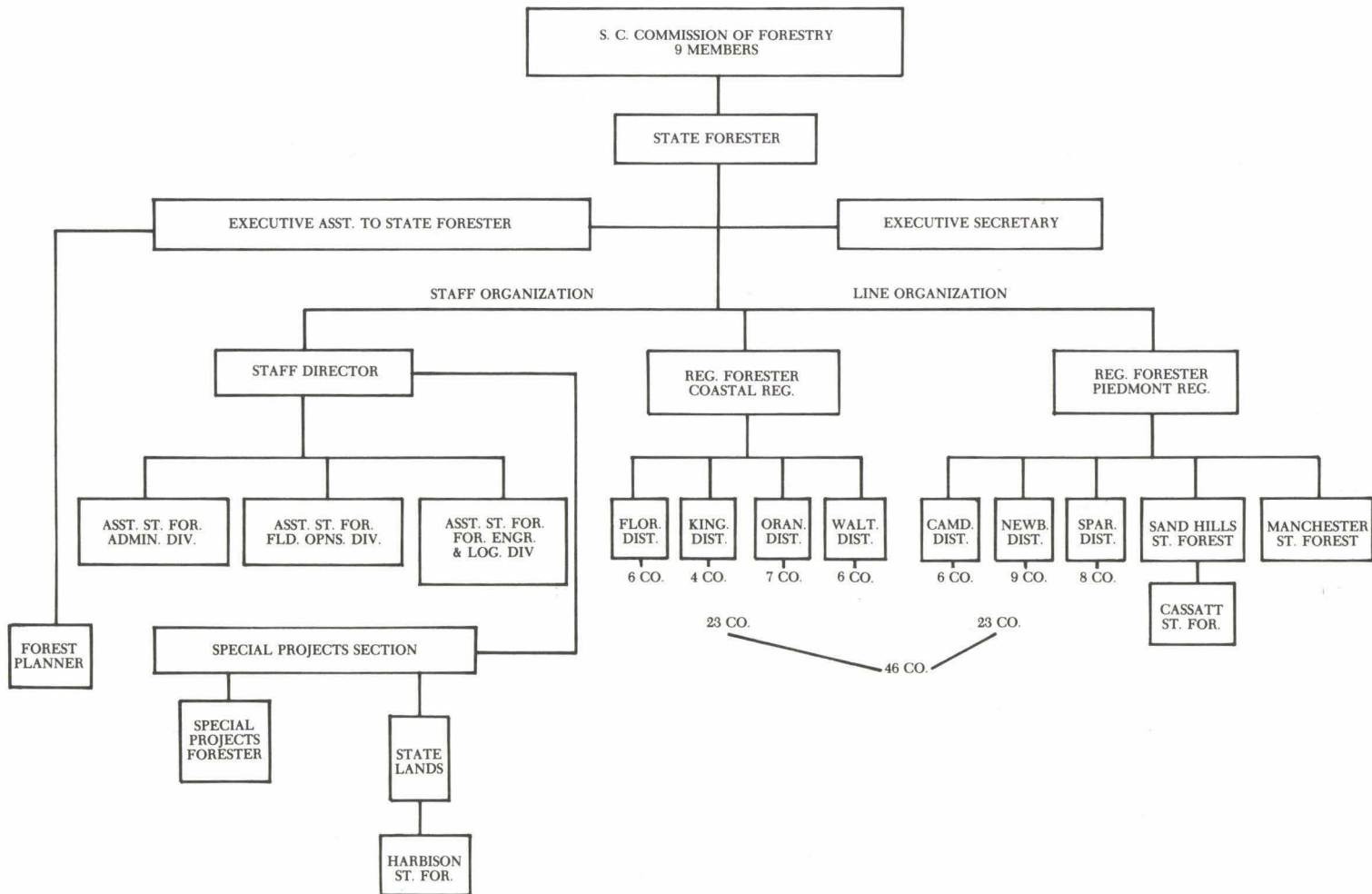
*Department of Wildlife and Marine Resources* — Assisted in the clearing of a new boat ramp site and parking area at Murells Inlet.

Revised the management plan for the 185 acre Samworth Plantation.

*Department of Youth Services* — Site prepared and planted sixty acres with loblolly pine seedlings on the Birchwood Campus. Assisted in the establishment of a white pine Christmas tree plantation.

### STATE LANDS FOREST MANAGEMENT PROGRAM 1984-85 FOREST PRODUCTS SALES

Agency	Purpose of Cut	Acres	Bd. Ft.	Cords	Sale Price
<i>Dept. of Mental Retardation</i>					
Whitten Center	Pulpwood Thinning and Harvest	39		1,000	\$ 12,356.50
<i>Division of State Parks</i>					
Cheraw	Insect and Wildfire Damage			544	4,054.36
Greenwood	Boat Landing Clearing and Insect Salvage			55.4	514.22
Long Bluff	Power Line Clearing			8.1	32.40
<i>Wildlife &amp; Marine Resources</i>					
Santee Reserve	Fire Salvage	75	100,711	888	23,205.12
Webb Wildlife Center	Harvest	44	618,939		79,055.00
	Hardwood Thinning	88		700	1,555.00
			719,650	3,195.5	\$120,772.60





## HISTORY

Interest in the reforestation and protection of forest land in South Carolina began as early as 1787 when a law was passed which provided for the punishment of any person who wilfully, maliciously or negligently caused fire to do damage to the property of another. Between 1787 and 1912 some eleven bills were passed concerned with forestry, largely dealing with the protection of the forest from fire. Increasing activities in lumber and naval stores directed attention of thoughtful individuals to the fast disappearing timber supply. The growing interest in the future of South Carolina's forest resources culminated in the Act of the General Assembly of South Carolina (1976 Code of Laws, Volume 16, Title 48, Chapter 23), April 26, 1927, creating the State Commission of Forestry. The first appropriation of \$4,000 was made by the General Assembly in 1928.

The first organized forest fire control efforts were initiated in 1928 when groups of landowners in cooperation with the S. C. Forestry Commission formed five forest fire protection organizations for the control of woods fires on some 195,000 acres of woodland. These Forest Protective Associations, as they were known, grew in number and size until 1944 when 24 counties had organized fire protection organizations.

The year 1945 was a banner year for forest fire protection, for it was then that the General Assembly passed the South Carolina Forest Fire Protection Act (1976 Code of Laws, Volume 16, Title 48, Chapter 33) which extended organized forest fire protection to every county in South Carolina — the first of any of the southeastern states to take such a step.

Paralleling the growth of forest fire protection, reforestation of cutover and idle land also came in for ever increasing emphasis. Just two years after the Act creating the agency, the General Assembly authorized the Forestry Commission to establish a nursery and grow forest tree seedlings. This was done on a 5½-acre tract near Camden where 731,400 seedlings were raised the first year. This program has grown to four state nurseries and three industry-operated nurseries which now produce some 100 million forest tree seedlings annually, both pine and hardwood, for planting throughout South Carolina. In 1963 attention was given to improving the quality of seedlings available for planting in South Carolina by establishing seed orchards of superior trees through a cooperative Tree Improvement Program involving both state and industrial interests.

Direct assistance to farmers and other landowners in managing their forest land began in the winter of 1930-31 as a demonstration in Fairfield County of proper thinning, measurement of board foot content of standing timber and use of equipment in suppression of forest fires. Under a cooperative agreement with the county agricultural agents, such demonstrations were held just two years later in 33 counties. Such direct assistance has grown through the years and has expanded to include individual forest land examinations, 71,496 of which have been made by

Commission foresters since 1941. In addition to these examinations, Forestry Commission foresters mark timber for sale for landowners.

From the very beginning of activity by the State Commission of Forestry, education has been a prime function in the fields of fire protection, reforestation and forest management. In the fall of 1928, at the South Carolina State Fair, an exhibit program was initiated that has been carried on continuously since that time. Each year the Forestry Commission places exhibits promoting a forest conservation concept in the State Fair and in every county fair that provides the space. The year 1929 saw expansion of the Forestry Commission's educational efforts when, in cooperation with the American Forestry Association, one, then later three, motion picture trucks showed movies and distributed literature to schools, clubs and other groups. In 1930 it was reported that 320 shows and lectures reached a total of 54,000 men, women and children. An additional boost was given the school program when in 1931, in cooperation with the office of the Supervisor of Vocational Agricultural Education, forestry was added as a study in Vocational Agriculture classes throughout the state.

At present, heavy emphasis continues through all media available — schools, clubs, civic groups, radio and television and the press in telling the forest conservation story and the needs of the future.

It is expected that the nation's demand for softwood from the South will increase from the present 35% to more than 50% by the year 2020. Further, pressure on the available supply of hardwood will increase proportionately. The outlook presents both a challenge and a distinct opportunity to increase appreciably the contribution of the wood-using industry to the economic health of South Carolina. Multiplied many times also will be demands for other uses of the forest — recreation, wildlife management, water conservation and a myriad of other needs in the area of aesthetics. The South Carolina Forestry Commission has been concerned through the years with all aspects of forest conservation and will continue to promote by every means available the wise use of South Carolina's forest resources to meet the demands of the future.

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